DOCUMENT RESUME

ED 304 076 HE 022 262

TITLE	Directory of Economic Development Programs at State Colleges and Universities.
INSTITUTION	American Association of State Colleges and Universities, Washington, D.C.
SPONS AGENCY	Economic Development Administration (DOC), Washington, D.C.
REPORT NO	ISBN-0-88044-094-5
PUB DATE	Feb 89
NOTE	188p.
AVAILABLE FROM	AASCU Press, 4720 Boston Way, Lanham, MD 20706 ($22.50 paperback, plus $2.00 shipping).
PUB TYPE	Reference Materials - Directories/Catalogs (132) -- Reports - Descriptive (141)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	College Programs; Community Services; *Developmental Programs; *Economic Development; Economic Progress; Higher Education; *Outreach Programs; *Public Colleges

ABSTRACT

A directory describing some of the economic development outreach programs currently administered by colleges and universities is presented with detailed descriptions of examples of the current wide variety of economic development activities. Listings for 382 programs at 170 public higher education institutions nationwide are provided, based on data from a 1987 mail survey of all presidents, chancellors, and system heads of member institutions of the American Association of State Colleges and Universities and the National Association of Land-Grant Colleges. Programs included had to meet the following criteria: permanence, have economic development as the primary objective with some form of community or regional outreach, and a maximum of 10 program listings per institution. The four main categories are multiple services for general audiences, multiple services for specific audiences, specific services for specific audiences, and specific services for general audiences. Programs are listed alphabetically by state and include such information as description (i.e., goals, activities, innovations, audience), structure (i.e., staffing, advisory board, funding), future plans, advice, products (i.e., publications and awards), and contact persons. Two indices list programs by objective and by state. (SM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED304076

aascu

DIRECTORY

OF

ECONOMIC DEVELOPMENT PROGRAMS

AT

STATE COLLEGES AND UNIVERSITIES

AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES

HE 022 262

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

AASCU

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Directory of Economic Development Programs at State Colleges and Universities

American Association of State Colleges
and Universities

This book was compiled and produced through the efforts of the following individuals:
Ralph Alterowitz
(advice and consulting on corporate relations and economic development issues)
Robert Duke
(monitoring of AASCU's conformance to federal grant requirements)
Joanne Erickson
(editing, coordination of printing and distribution)
Mary Gordon
(proofreading)
Evelyn Hively
(management of 1987 EDA-funded activities)
Trudy James
(typesetting and conversion of computer files for typesetting)
Meredith Ludwig
(general supervision of research, categorization of listings)
Nilda Rendino
(budget monitoring for the project)
Stephanie Rendino
(word processing)
Carter Rowland
(advice and consulting on higher education and economic development)
Heidi Wassan
(directory concept, survey design and dissemination, data compilation, data analysis and integration, categorization of listings)
Allan Watson
(management of AASCU's current economic development activities)

Published 1989 by American Assocation of State
Colleges and Universities

Distributed by arrangement with
University Publishing Associates, Inc.
4720 Boston Way, Lanham, MD 20706
3 Henrietta Street, London WC2E 8LU England

Library of Congress Cataloging-in-Publication Data

Directory of economic development programs at state colleges and universities.

p. cm.
Includes indexes.
ISBN 0-88044-095-3. ISBN 0-88044-094-5 (pbk.)
1. Industry and education—United States—Directories.
2. economic development projects—United States—Directories. I. American Association of State Colleges and Universities.
LC1085.2.D57 1988 88-16975
378'.103—dc19 CIP

Contents

Preface v

Foreword vi

Introduction 1

Category A 3

Category B 83

Category C 95

Category D 131

Indices 167

Preface

The *Directory of Economic Development Programs at State Colleges and Universities* highlights various cooperative activities and gives institutions the opportunity to explore the possibilities of replicating programs that have merit.

In analyzing the material assembled by AASCU, one is struck by the sheer volume of activity. Much of it has evolved over the past ten years. Urban and economic development have burgeoned more rapidly because resources have been more readily available than in rural areas.

There is a general uniformity of objectives in both rural and urban universities. While technical transfer and international trade may be confined more logically to urban areas and agricultural/business to rural areas, most institutions become involved in incubator development, small business assistance, and entrepreneurism.

Perhaps the most obvious trend at most institutions is to develop "umbrella" organizations—such as regional, rural, or urban institutes—to ecompass the needs of various area constituents. Funding opportunities seem more available under this mode of organization, since private and public funding agencies seem to cater to more formal structures.

Success in these ventures has been mixed. Unless community and business leaders, in concert with universities, help define problems and objectives in the geographical areas, support levels are minimal. Advisory groups representing the whole spectrum of constituents can help locate funding sources. This is particularly important as federal funding sources dwindle.

The categories in the directory are generally accurate. However, activities such as technology transfer may be sophisticated in one environment and fledgling in another, showing the wide variety of such services available at public colleges and universities across the nation.

J. Carter Rowland
Consultant, AASCU
May 1988

Foreword

The Economic Development Administration (EDA) has long recognized that colleges and universities can play an important role in local economic development. For over twenty years it has administered a University Center Program, which provides seed money to help colleges and universities initiate and implement programs that address local economic development problems and needs.

In fiscal 1985 EDA awarded a grant to the American Association of State Colleges and Universities (AASCU) to conduct the 1986 National Conference on Higher Education and Economic Development. The success of that conference prompted EDA to provide additional financial assistance to AASCU to host a series of regional conferences on economic development and higher education and to publish a directory describing some of the economic development outreach programs currently administered by colleges and universities.

This directory is not presented as a comprehensive listing of all college and university economic development programs in the country. However, we believe it is the first directory to provide detailed descriptions of examples of the wide variety of economic development activities in which higher education institutions are now involved.

Whether your institution is just beginning to address economic development issues or is interested in expanding its activities in economic development, EDA hopes this directory will suggest programs and activities that are appropriate for your situation.

Orson G. Swindle, III
Assistant Secretary
for Economic Development

Introduction

This directory was compiled and produced as part of the American Association of State Colleges and Universities' (AASCU's) ongoing commitment to supporting the community development efforts of public colleges and universities across the nation. In 1987, AASCU received a grant from the U.S. Department of Commerce Economic Development Administration to fund, among other things, the establishment of a data base on economic development programs at public higher education institutions. This directory stems from that effort.

The directory contains listings for 382 programs at 170 public higher education institutions nationwide and, though not exhaustive, is the only available compilation of its kind. It is based on information provided voluntarily in questionnaires AASCU mailed out during the summer of 1987 to all the presidents, chancellors, and system heads of member institutions of AASCU and the National Association of State Universities and Land-Grant Colleges (NASULGC). The directory listings are based on questionnaires received by the end of 1987. Some institutions did not respond, some responded but had no formal programs to list, and a few sent incomplete information. Some states had their own directories and may therefore have not sought listing here.

Of the usable questionnaire responses received, AASCU staff determined their suitability for inclusion in the directory by applying the following criteria: (1) The program had to be a permanent (ongoing), formally established structural unit of its institution; (2) The program had to have economic development as its *primary* objective, involving some form of outreach to its community, region, or state. (For example, programs with *cooperative education* as their main objective were excluded from the listings); (3) A maximum of ten program listings was allowed per institution; (4) The institution had to provide the kind of information requested in the questionnaire. (A few schools sent information not requested.)

Some program entries contain more subheadings ("goals," "audience," "staffing," "funding," etc.) than other entries. For those entries for which a subheading appears to be missing, the reason is either that the institution did not provide any information on it or provided information not requested.

The entries were then consolidated and edited to ensure clarity, coherence, and uniformity—i.e., convenience for the reader.

Not surprisingly, because of the extreme diversity of the programs, it was quite a challenge to devise a means of classifying them. After many discussions, AASCU staff members decided to categorize in a manner that would make the directory of the greatest possible use to as many people as possible—by the scope and audience of the program, by primary objective, and alphabetically by state and institution.

It is the hope of all at AASCU and NASULGC that readers will find this directory an indispensable resource in their endeavors to establish or improve programs at their own institutions and to discover what other institutions are doing. If so, the book should also stimulate an inspiring cross-fertilization of ideas that will benefit not only all of public higher education but also the nation's economy and—ultimately—its quality of life.

Category A

Multiple Services for a General Audience

Programs that offer several different kinds of economic development assistance or that offer a complete economic development package (such as a Small Business Development Center or a Center for Entrepreneurship). This category also includes programs having a loosely or generally defined audience—for example, "small business owners," "entrepreneurs," "the State of Texas," "a five-county region."

Alabama

College of Business, Division of External Affairs
Auburn University at Montgomery

Description: *Goals*—To facilitate the economic development process in Alabama. Activities—The Division of External Affairs consists of five centers: (1) Center for management and Executive Development (conducts training programs), (2) Center for International Commerce (works with medium and large organizations or international projects), (3) Alabama Incubator Center (assists in the development and maintenance of the incubator). *Audience*—Alabama businesses. The Small Business Development Center provides management and technical assistance to small businesses. The Auburn Technical Assistance Center (ATAC) provides management and technical assistance to medium and large businesses.

Structure: *Staffing*—Five directors, eight specialists, graduate research assistant, clerks, secretary. *Funding*—State, federal, and private funding. Income used to support graduate student and faculty research. *Program Evaluation*—Jobs, research publications.

Products: *Publications*—Technical reports where appropriate. Journal articles, monographs. *Awards and Recognition*—Best Project for Management Assistance awarded to ATAC by the National Association of Management and Technical Assistance Centers.

Future Plans: Expand and enhance performance of existing centers. Establish a new center, the Center for Economic Policy Research.

Contact: Achilles A. Armenakis, Associate Dean, 205/826-4030

Office for the Advancement of Developing Industries (OADI)
University of Alabama, Birmingham

Description: *Goals*—To foster the development of new and expanding industries in the field of advanced technology. To promote economic growth in Alabama by focusing public and private resources on technologies that create new employment. *Activities*—In October 1986, moved into the 36,000-square-foot Center for the Advancement of Developing Industries. Building is 2/3 leased to start-up companies. *Audience*—New/expanding industries, entrepreneurs, scientists. *Innovations*—University-government-private partnership demonstrating a unique commitment to the nurturing of business ventures.

Structure: *Staffing*—Director, two program managers, administrative assistant, word-processing technician, receptionist/telephone operator. *Advisory Board*—Being formed. *Funding*—State funded, supported by private enterprise, with small amount of generated income used to support the existing program. *Program Evaluation*—Program and companies supported by OADI evaluated by university and private-sector experts in appropriate fields.

Products: *Publications*—OADI promotional brochure and quarterly newsletter. *Awards and Recognition*—Recognized by local and state governments and businesses as leader in advanced technology.

Future Plans: Continue promotion of the center. Identify and encourage start-up businesses. Expand venture capital network. Publish local high-tech directory. Continue research and development activities.

Contact: Martin R. Tilson Jr., Director, 205/934-2190

Alaska

Small Business Development Center of Alaska
University of Alaska

Description: *Goals*—To support economic development in the state by providing assistance in the start-up, expansion, and successful operation of small businesses and with facilitating technology and development and transfer within the state's small business community. *Activities*—Core program of counseling and technical assistance and training for small business owners. *Audience*—Small businesses in Alaska, people considering starting a business in Alaska. *Innovations*—Use of videotapes and 800 phone numbers in the state.

Structure: *Staffing*—A State Director supervises and secures funding for the state program. Three sub center directors each deliver services to one-third of the state areas. Clerical workers assist these positions. *Funding*—Cash from Small Business Administration, State Department of Commerce, and Economic Development-in-Kind-University of Alaska. Income generated from seminars. *Program Evaluation*—Assessment in number of clients served, number of businesses started, number of counseling sessions.

Future Plans: Continue a strong commitment to training and counseling assistance aimed at expanding small business access to international markets. Expand the program to serve and support inventors and encourage the development of new products and technologies. Expand the services to include assistance with patent searches and applications, copyright assistance, technical and market feasibility assessments, and assistance with identifying and accessing sources of R&D and operational funds.

Advice: Visit existing programs in other regions to determine what programs work for them and how to adopt their programs to meet state needs.

Contact: Janet M. Nye, State Director, 907/274-7232

Alaska Economic Development Center

University of Alaska, Southeast

Description: *Goals*—To use resources to serve the public interest. To assist eligible entities with economic development activities. *Activities*—Through AEDC, the university is able to use its faculty members, students, equipment, physical facilities, and information resources to provide technical assistance to eligible parties. The AEDC has provided various types of technical assistance such as training and education, research studies, feasibility studies, information resources, organizational assistance, and other support to entities involved in economic development. *Audience*—Units of the federal and state government, municipal corporations, community and civic organizations, cooperatives, nonprofit corporations, Alaska Native Claims Settlement Act Corporations, and IRA/Traditional Councils. The information and technical resources developed by AEDC are available to the general public. *Innovations*—The AEDC delivers direct technical assistance services through its three campuses located in Juneau, Sitka, and Ketchikan. The AEDC utilizes faculty members in the disciplines of accounting, business administration, computer information services, and public administration to assist eligible entities with their economic development programs.

Structure: *Staffing*—Full-time director and secretary. *Advisory Board*—Eleven members. *Funding*—Grants from the U.S. Department of Commerce, Economic Development Administration, under its University Center Program, and from the Alaska Department of Commerce and Economic Development, Division of Business Development. Significant in-kind support is provided by the University of Alaska, Southeast. *Program Evaluation*—The measurement used by the granting agencies is "Jobs saved, Jobs created." Other measurements are difficult to arrive at when assistance is limited to economic development activities, such as AEDC's assistance. Except for direct involvement in community-supported business enterprise, job measurement is difficult. Other measures include number of workshops and programs, organizations assisted, and information requests satisfied.

Future Plans: Continue delivery of services.

Advice: Work with your faculty and administration to establish the quality and quantity of their involvement prior to initiating a program. Enlist the strong support and early involvement of top administration officials in your institution. Work out line relationships between your purchasing, travel, accounting, and personnel departments and the top administration for smooth operation of the program.

Contact: Patrick M. Anderson, Director, 907/789-4402

Arizona

Arizona State University Research Park

Arizona State University

Description: *Goals*—Arizona State University Research Park (ASURP) is an important economic development program created in support of Arizona State University's nationally recognized research. *Activities*—National Association of Purchasing Management (NAPM) has had an ongoing working relationship with ASU's college of business for several years, centered around conducting a number of one or two-week management and executive training programs at the university. Last fall, NAPM established the Center for Advanced Purchasing Studies at ASU under the direction of Professor Harold Fearon. This relationship has led to the relocation of the headquarters of NAPM from Oradell, NJ to the park. NAPM and the Center for Advanced Purchasing Studies moved into an 11,270-square-foot building in the fall of 1987 with a staff of approximately thirty-five people. Activities include conducting joint research in business management and forecasting (special study of purchasing materials' efficiency and productivity), professional educational program development, certification, seminars, and conferences. Plans for the construction are one more reason for NAPM's move to the park. The conference center will become the central meeting area for human interaction within the park and will be the site of numerous scientific and executive management conferences.

Structure: *Staffing*—Planning director, executive director, marketing manager, executive secretary, marketing intern. *Advisory Board*—Nine members. *Funding*—Development and operation funded through land lease; maintenance funded by the state.

Future Plans: Imperial Chemical Industries—Advanced Materials—Fiberite Division is the park's newest tenant. ICI has big plans for development in ASU's Research Park. Phase One will include two buildings totaling 100,000 square feet and land lease and options for over thirty-eight acres (or eighteen percent of the total leasable acres). The Advanced Materials Group of ICI is only one of eight diversified groups that may have a future presence in the park. All eight groups relate to research and educational programs found in the university.

Contact: Michael S. Ammann, Executive Director, 602/752-1000

Hahn Center for Entrepreneurship and Innovation
Arizona State University

Description: *Goals*—To nurture and promote entrepreneurship to present and potential business owners and to students on graduate and undergraduate levels. *Activities*—Seminars and lectures in entrepreneurship including speakers such as H. Ross Perot, and Ed Beauvais of America West Airlines. In addition, the center sponsors incubator projects in which new businesses are nurtured in facilities shared with established businesses and guided by experienced business people. *Audience*—Students and business community. *Innovations*—the incubator is a unique program for the center and an innovative technique for fostering business growth.

Structure: *Staffing*—Director, Entrepreneur-in-Residence (business member who helps students), administrative assistant. *Advisory Board*—Eighteen members. *Funding*—Private endowment for operational funds; state salaries. *Program Evaluation*—(1) Does the unit have an interdisciplinary thrust and successfully promote cooperation among faculty and graduate students from different academic units? (2) Is the unit able to attract outside funds to support its activities or have strong support from outside the university? (3) Is the unit advancing knowledge or performing a valuable service in a manner that would be unlikely to occur at the university if the unit did not exist?

Products: *Publications—Enterprise Network* newsletter containing small business seminar announcements, guest articles and tips, and economic statistics helpful to small businesses.

Future Plans: Develop the case institute. Continue the incubator project.

Contact: Lew Wright, Director, 602/965-2809.

Morrison Institute of Public Policy
Arizona State University

Description: *Goals*—To assist public- and private-sector decision makers in developing policies that will enhance the quality of life and economic vitality of the state. *Activities*—(1) Acts as a liaison among government, the business community, and Arizona's largest university; (2) Conducts studies that yield research results and policy recommendations to enhance the prospects for Arizona's economic growth, such as, "Urban Growth in Arizona," a study funded by the Arizona state legislature. The institute is currently investigating state and local economic policies as they affect land use, job creation, infrastructure development, and the quality of life. The final result of this policy analysis will be a set of legislative recommendations on the state government's role in the economic development of its urban areas. The Morrison Institute is also helping to develop the state's human capital by creating a strategic plan for Arizona's system of vocational education. Sponsored by the Arizona Department of Education, the institute is conducting an economic analysis of Arizona's future labor market demands and the skills required for success in that market. The study is utilizing nine separate business-industry-education task forces that are each examining a unique aspect of Arizona's vocational training programs. Task force topics range from how to deal with "at risk" youth, to rural economic development, to which technologies will be most critical in the work place of the future. The institute is conducting a similar project under contract with the city of Phoenix. In this case, the Morrison Institute is working closely with the Phoenix Commission on Educational Excellence. This effort is aimed at creating a linkage between Phoenix and local school systems in order to improve educational performance and produce a quality work force. Another example of how the Morrison Institute's policy research affects economic growth is its study of joint utilization efforts among five Arizona cities. This project involved an in-depth survey of intergovernmental cooperation on such issues as building programs, water use, economic development, and training programs. By studying five of the most rapidly growing, contiguous cities in Arizona, the Morrison Institute was able to encourage a number of new joint utilization projects that are beneficial because of significant economies of scale. *Audience*—Public and private-sector decision makers. *Innovations*—Key to the Morrison Institute's economic development program is its interdisciplinary approach to policy issues research and its fostering of public-private partnerships in both policy analysis and problem solving.

Structure: *Staffing*—Director, administrative assistant, two research specialists, four research analysts, three graduate research assistants. *Advisory Board*—Thirty-two members; Executive Commission, eight members. *Funding*—Four general sources of funding: (1) Original endowment from Martin and June Morrison of Gilbert, Arizona to conduct public policy research, (2) private gifts, (3) grants and contracts, (4) state funding of some personnel. Research results used to leverage other private and public funding for further research. *Program Evaluation*—Draft reports submitted to faculty experts in the specific area for review. Research results then reviewed by both the client and the institute's advisory board and evaluated on the basis of criteria specific to the project.

Future Plans: Build the endowment to support independent research.

Contact: Dr. Rob Melnick, Director, 602/965-7424

Arkansas

Office of Economic Development
Arkansas Tech University

Description: *Goals*—To provide information and advice related to business management. To provide technical assistance with computer-related problems. To promote university-industry cooperative research and training programs. *Activities*—A Business and Management Development Center has been established to provide assistance to business and industry. A Computer-Aided Design Center facilitates technology transfer and technical training. The Office of Economic Development coordinates research and training programs with business and industry. *Audience*—Regional business and industry.

Structure: *Staffing*—Part-time director. *Funding*—State appropriation. Income generated by projects is used to maintain equipment and improve facilities.

Products: *Publications—Guide for Going into Business.*

Contact: Dr. Jack Hamm, Dean, School of Systems Science, 501/968-0353

Economic Development Center
Henderson State University

Description: *Goals*—Create jobs and income for people in southwestern Arkansas. *Activities*—Development of employment opportunities through industrial support services. Resource development for creating employment opportunities through the formation of new businesses. *Audience*—Industrial development with emphasis in manufacturing and service industries. *Innovations*—The university has recruited a cadre of consultants with extensive experience in manufacturing and management. This pool of talent allows the university to offer clients a vast amount of experience in any area of manufacturing, while keeping expenditures within budget limitations.

Structure: *Staffing*—One full-time director. *Advisory Board*—To be announced soon. *Funding*—From the Arkansas Department of Higher Education. *Program Evaluation*—The program is new. To be successful, the university must develop relationships that extend beyond the campus to businesses and industry and, through that relationship, help create new jobs and income.

Future Plans: Implement an incubator facility.

Advice: Ensure that the university is willing to commit its resources to foster economic development.

Contact: Clayton Franklin, Director, 501/246-5511 or 3511

Entrepreneurial Service Center
University of Arkansas at Fayetteville

Description: *Goals*—(1) To create new jobs in Arkansas; (2) To assist new businesses in starting; (3) To help existing businesses increase profit and expand; (4) To export university expertise into the business world. *Activities*—ESC is currently working with 180 clients. Last fiscal year, three consultants assisted seventeen companies in raising debt and equity financing. ESC clients reflect 120 jobs saved, 244 jobs added, and the potential for 560 additional jobs as of December 31, 1987. In addition, ESC consultants conducted eighty-nine seminars and presentations to groups across the state during the year. Investment Resource Network (IRN) is a program started here to find equity capital to finance start-up ventures. This free service matches investors with Arkansas entrepreneurs. Recent successors have created tremendous interest from inside and outside the state. *Audience*—Businesspersons (entrepreneurs and investors). *Innovations*—(1) Business consultants develop business plans with clients; (2) Consultants then attempt to find financing and make business more profitable; (3) Consultants find investors and match entrepreneurs and investors for equity financing.

Structure: *Staffing*—Five business consultants, three secretary/receptionists/administrators. *Funding*—State funds, primarily. Private funds for one office. *Program Evaluation*—Measured by the success of clients, in terms of jobs saved and jobs added.

Future Plans: Start three additional business incubators around the state. Start five additional ESC offices around the state in the next eighteen months.

Advice: Hire business consultants who have been CEOs of a start-up venture. Keep the program flexible under a general plan to go forth and do good!

Contact: Dick Rogers, Field Director, 501/575-4151

Research & Public Service
University of Arkansas at Little Rock

Description: *Goals*—To foster economic and community development for the State of Arkansas. This unit was originally established in 1957 as a research support program to enhance industrial recruitment. *Activities*—Business assistance is provided through loan packaging and management consulting. Business and industrial marketing studies are conducted for private clients and economic development agencies. State data bases are maintained for research and forecasting purposes. Management and labor education programs are available; these are customized for companies and their workers. Leadership development is promoted through business, labor, and community organizations. *Audience*—State of Arkansas, especially businesses and state and local government agencies. *Innovations*—Housing of the Small Business Development Center (SBDC) as an integral part of the university's applied research and extension unit. The SBDC is thus able to take advantage of research and extension specialists with little difficulty.

Structure: *Staffing*—Eighty-three full-time staff. Four are Ph.D.s, nineteen are MBSs or MPAs or MSs. The remainder are clerical/support staff. Typical job titles are Research Specialist, Associate Research Specialist, Assistant Research Specialist. *Funding*—Approximately $2 million appropriated from state general funds to the university for the operation of the unit. An additional $250,000 is generated annually through contracts, fees, and grant income. *Program Evaluation*—An overall management planning effort identifies specific twelve-month objectives for each unit within research and public service. These objectives are evaluated at least quarterly to assess progress or need for redirection.

Future Plans: Develop a closer relationship with the two-year campuses in Arkansas (community colleges) in order to create a larger network for outlet of applied research and extension products (feasibility studies, management seminars, etc.)

Advice: Identify and achieve front-end agreement on clear, concise program objectives. These objectives should be easy to understand so that all staff members can know the direction of the program and understand when desired results have been achieved.

Contact: Dr. Beadle Moore, Associate Provost, 501/371-5492

California

University Relations
University of California, Davis

Description: *Goals*—To assist campus and regional development in ways that enhance the academic programs for the university. *Activities*—The university relations office holds membership in local and regional economic development commissions, councils, and corporations. It participates in the activities of those organizations. In addition, it meets with firms considering locating in the area to describe university activities and programs that might be attractive to the prospect. *Audience*—Existing and prospective employers.

Structure: *Staffing*—The vice chancellor of university relations and, on occasion, development officers representing specific colleges or professional schools. *Funding*—From the university relations office.

Future Plans: The campus is considering the possibility of creating a research park to attract enterprises to the Davis area that have a logical nexus with the research programs of the university. Also under consideration is the possibility of creating a future campus housing and hotel/conference center in collaboration with private developers.

Contact: Lawrence Shepard, Vice-Chancellor—University Relations, 916/752-2616

Colorado

Small Business Development Center
Adams State College

Description: *Goals*—To provide training in applied business techniques to local business owners/managers. To work with a six-county development commission to provide specialized resources for development activities. To develop a data base for existing and potential businesses. *Activities*—Workshops for the local business community, including target marketing, providing service, advertising techniques, and small business computer programs. *Audience*—The six-county local business community. *Innovations*—Cooperation and coordination among the ASC school of business, the college as a whole, banks, a six-county development commission, and local businesses to draw resources and ideas from each.

Structure: *Staffing*—One part-time dean, a school of business project coordinator, several part-time faculty positions for specialized consulting and workshops. *Advisory Board*—Eight members. *Funding*—Title III, local county funds, state funds, Adams State College contributions of time and space. *Program Evaluation*—(1) All workshops evaluated by participants; (2) Advisory group guides research/resource usage, (3) Broadly based political and business dialogue.

Future Plans: Develop a comprehensive small business assistance center with resources for continued training of local business owner/manager and specialized assistance to development efforts. Develop a practical data base for use by the business community and for use in personal consultation with individual businesses.

Advice: Involve banks and elected political officials. Provide assistance of most urgency and visibility first.

Contact: J. Thomas Gilmore, Dean, School of Business, 303/589-7161

Centre for Advanced Technology
Colorado State University

Description: *Goals*—To create additional revenues in support of Colorado State University research and educational programs. *Activities*—First phase of infrastructure (streets and utilities) installed. A 260-room hotel with convention facilities for 1,200 people is operating. An 86-acre parcel sold to Everitt Enterprises, a developer, and one building is going up on this land. Four tenants have signed leases. CSURF will develop its 149 acres, marketing to other developers and tenants. Construction of one building beginning. *Audience*—R&D companies or units of larger companies, service companies, biomedical and biotechnical firms, suppliers of local high tech firms, companies involved in assembly of scientific components. *Innovations*—Ability to foster outside technology R&D through for-profit subsidiary of CSURF.

Structure: *Staffing*—Four persons. *Advisory Board*—Three person CSURF board of trustees. *Funding*—No public funds. Financed solely by CSURF. *Program Evaluation*—Inhouse.

Advice: There are not enough high-tech companies in the nation to fill all of the university-related research parks now started or being planned. Seriously consider a well-balanced, mixed use.

Contact: R. B. Hutchinson III, President, 303/482-2916

Delaware

University Research Park at Lewes, Delaware
University of Delaware

Description: *Goals*—To serve as an incubator for new industries with production objectives related to the curriculum at the university. *Activities*—Research Park is presently available for leasing. The university has established an economic initiatives program to actively attract industry to the park. *Audience*—Primarily marine and agribusiness industries.

Structure: *Staffing*—An acting Assistant to the President for Economic Initiatives (until such time as the position is filled permanently). *Advisory Board*—Eight members from community and industrial interests. *Funding*—University funds currently underwrite the project. When fully operational, it will be self-sustaining. *Program Evaluation*—Through the university planning process.

Products: *Publications*—Various.

Future Plans: Continue development of the park.

Contact: Michael F. Middaugh, Assistant to the President for Institutional Research, 302/451-8350

Florida

NASA Southern Technology Applications Center
State University System of Florida

Description: *Goals*—To disseminate information, to facilitate NASA technology transfer and commercialization of space. *Activities*—A sophisticated network of information resources and technology transfer expertise devoted to providing high-quality service that managers, professionals, researchers, and entrepreneurs need to survive in today's competitive climate. Facilitates the flow of information for answering questions or solving problems submitted by Florida industrial, professional, agricultural, and state and local government users. Searches 1,200 worldwide data bases, demographic trending, market research, faculty linkages, economic feasibility studies, grant assistance, and data base development. *Audience*—Academe, public, and business sectors. *Innovations*—Has the largest collection of electronic data bases in the U. S. and inhouse expertise to search them.

Structure: *Staffing*—Each of the offices at the nine participating state university campuses has a director. *Advisory Board*—Yes. *Funding*—1/3 NASA, 1/3 Florida State University System, 1/3 income generated by STAC offices.

Future Plans: Continue to serve the needs of NASA and the State University System.

Contact: Adriana Cantillo, Director,FIU STAC Office, 305/554-3039

Special Note: All State University System of Florida campuses participate in this program.

Florida Small Business Development Center

State University System of Florida

Description: *Goals*—To deliver a wide range of programs designed to provide business owners with management skills necessary to operate successfully. To assist in economic development efforts in Florida by promoting and strengthening the orderly growth of new and expanding small businesses. To enhance the economic stability of the state through academic programs aimed at small businesses. To maximize the use of existing and new free or low-cost resources to assist in program delivery. To concentrate activities on special emphasis groups such as minorities, veterans, and women. *Activities*—One-on-one counseling in procurement, marketing, finance, accounting, computers, management, personnel, and other business-related areas. Assists in technology transfer, research, and resource coupling. Coordinates and conducts research on technical and general small-business problems. Provides conference and workshop training on general and specific business topics. Supports specialized efforts in product innovation, international trade and assists disadvantaged businesses. *Audience*—Florida small businesses as defined by the Small Business Administration. *Innovations*—Statewide network of eight metropolitan Small Business Development Centers supporting twenty-five offices and dozens of "circuit rider" locations in rural areas. Program is a cooperative effort between the Small Business Administration and the State University System of Florida. Also participating are numerous junior and community colleges, chambers of commerce, and volunteers from the public and private sectors.

Structure: *Staffing*—Forty-three full-time, thirteen part-time, seventeen volunteers, fifteen graduate students, three undergraduate students. Each of the eight participating state university campuses has its own staff. *Advisory Board*—Representatives from each participating university, a board of regents representative, and members from the Florida Department of Commerce and other state agencies. Total number is thirteen. *Funding*—Small Business Administration, Florida legislature, participating universities. Additional support under separate contract from Department of Defense. Minimal program income used for program activities. *Program Evaluation*—Systematic survey used to solicit client comments and reaction to program services. Contract deliverables are measured in number of clients counseled and trained, hours of activity, training events, etc.

Products: *Publications*—"A Plain English Tax Guide for Sole Proprietors," "A Recommended Loan Application Package," "Small Business Consulting Handbook."

Future Plans: Continue expansion of the program, both geographically (into rural areas and the densely populated southern Florida) and in terms of services.

Advice: Leverage resources to the greatest extent possible. Do not rely on "sole source" funding: continually seek alternative funding. Decentralize program delivery.

Contacts: Gregory L. Higgins, State Coordinator, 904/474-3016
Florida A & M University: Patricia McGowan, Director, 904/599-3407
Florida Atlantic University: Dr. William Marina, 305/338-2273
Florida International University: 305/554-2272
Florida State University: Dr. John Kerr, 904/644-4091
University of Central Florida: 305/275-2796

University of North Florida: 904/646-2476
University of South Florida: William J. Manck, 813/974-4274
University of West Florida: Donald M. Clause, Director, 904/474-2910

Florida Atlantic Innovation Center
Florida Atlantic University

Description: *Goals*—To seek out, encourage, and create fast-growth companies in the high-tech field. *Activities*—Assists entrepreneurs and technologists in the evaluation, selection, development, management, and funding of business start-ups. Evaluates the technical and economic viability of new concepts; serves as an equity partner; provides facilities and business support services; assists in securing debt and equity funding for the companies; provides resources and networks to improve business opportunity for start-up companies. *Audience*—Entrepreneurs who have a new idea with a proprietary edge and need technical, marketing, and management assistance. *Innovations*—Expecting to remain in the business "incubator" during the start-up phase, the entrepreneur can thus benefit from further developing the idea or invention while at the same time being in touch with potential investors or venture capitalists and establishing a strong marketing and distribution plan for the finished product.

Structure: *Staffing*—Director, codirector, staff assistant. *Advisory Board*—Seven members. *Funding*—Jointly funded by GENEXUS, Inc. and Florida Atlantic University. Client fees for facilities and services. *Program Evaluation*—Performance benchmarks are established and analyzed on an ongoing basis.

Future Plans: Become an integral part of the new research park being established at FAU, in order to serve more companies.

Contact: Ed Miller, Director, 305/338-1615

Small Business Institute
Florida Atlantic University

Description: *Goals*—To provide local small businesses with the management assistance they need, and to give students the opportunity to apply the knowledge they have gained in the classroom to actual business situations.

Contact: Dr. Lawrence Klatt, Management and International Business Department, 305/393-3654

World Technology Center
Florida International University

Description: *Goals*—To expand international trade activities of small/medium-sized Florida companies with technical products or services; to provide opportunities for Florida faculty and students to assist in trade development and applications. *Activities*—Secures and fulfills contracts with Florida companies to tailor their technical products to the needs and requirements of target markets overseas. Faculty and/or students and/or other consultants fulfill the contracts through their knowledge of the target country and their technical knowledge of the product, its design, application, documentation, maintenance, or repair. Services have ranged from product redesign recommendations; to service of spare parts and safety programs; to installation and maintenance manuals; to technical translations of instructions. *Audience*—Small and medium-sized technical companies targeting their products or services for particular overseas markets. *Innovations*—In no other way can these companies so easily make contact with the broad spectrum of university and college capabilities and contract for a special result, in a specified time, for a realistic price. Similarly, the faculties and students are motivated to participate because the mechanism for contacting and contracting is established and workable.

Structure: *Staffing*—The director's office handles contacts, coordinates proposals, and monitors contracts for compliance with promised terms and delivery. At this time, over 3,500 listings are in the Florida index of available professionals. *Advisory Board*—One advisory board for each county. Currently, Palm Beach and Dade counties are fully staffed at about eighteen members each. *Funding*—In addition to board of regents, state university funding, income generated from some contracts to cover contingencies and community development and public-interest activity. *Program Evaluation*—Fulfillment of community needs and completion of client's needs for the deliverables agreed to at the cost and schedule needed.

Products: *Publications*—Representative titles for various organizations under contract: *Operations Manual; Design Recommendations; Installation*

Guide; R & D Location Factors for Asian Companies; Comparison of Location Factors; Guia Para Instalacion. Awards and Recognition—Invited speaker engagement at various trade forums.

Future Plans: Expand from initiating base in southeastern Florida to other key technical company locations in the state, such as Tampa, Orlando, Jacksonville, Panama City, etc.

Advice: Ensure sufficient start-up capital at state level; ensure host organization commitment at the top level; do not give away services—ensure recovery of full cost.

Contact: Arnold J. Rothstein, Director, 305/554-2366 or 305/627-7315

Center for Management Development
Florida International University

Description: *Goals*—To serve as a link between the college of business administration and the business community. *Activities*—Provides management and executive development training specifically tailored to its clients. Offers public noncredit programs in personnel administration and workshops in microcomputer applications in its microcomputer lab at the Bay Vista campus. Provides management consulting and technical assistance.

Contact: Linda Harris, Office of Public Affairs, Florida Board of Regents, 904/487-2061

Academic-Corporate Relations
Florida State University

Description: *Goals*—To foster a favorable climate between Florida State University and the private sector, with particular emphasis on developing academic-business relationships. *Activities*—Developed a corporate information system with data base of information on Florida businesses and corporations doing business in Florida and their connections with Florida State University. Works in close association with chamber of commerce groups and planning departments to promote university's strengths with the business community and to help lure new businesses to the area. Developed a Corporate Weekend, an annual event in which CEOs are invited to spend a weekend at the university for seminars and tours of the campus. *Audience*—Business and industry. *Innovations*—The uniqueness of the program is its emphasis on the interconnecting relationships of higher education and economic development. The Academic-Corporate Relations Office builds effective linkages between the university and the private sector, with the ultimate intention of contributing to the economic growth of the State of Florida.

Structure: *Staffing*—One corporate liaison officer. *Advisory Board*—The Academic-Corporate Relations Office is under the office of the provost. Funding—State. *Program Evaluation*—Measured by the increased interest of Florida businesses in the quality of research and variety of services available at Florida State University; the financial support of its research; an increased awareness of campus activities; and increased contacts by business with campus units.

Future Plans: To create a better understanding of the business world and its needs among the university's faculty and staff. To create a better understanding of the university and its needs among the business world. To prepare additional written brochures, directories, etc. to inform the business and university communities of the economic advantages of university-business linkages.

Contact: William F. Moeller, Assistant to the Provost for Academic-Corporate Relations, 904/644-1816

Florida Economic Development Center
Florida State University

Description: *Goals*—To utilize the resources of the university in order to provide assistance to the designated redevelopment areas of the state. *Activities*—Provides management development, management consulting and technical assistance to individual businesses, industries, and government to develop stability, resolve operational problems, assist in new ventures, and enhance managerial skills. Offers management assistance in economic development, industrial development, community development, targeting industries, retail market analysis, grant writing, microcomputer applications and community profiles.

Contact: Linda Harris, Office of Public Affairs, Florida Board of Regents, 904/487-2061

Small Business Institute
Florida State University

Description: *Activities*—Provides free counseling and evaluation services to small businesses that have been referred to the institute by the Small Business Administration. Counseling conducted by teams of business students nearing the completion of their degree programs, under the supervision of faculty. Program involves intensive on-site interaction with the business owners and staff, usually over a period of ten weeks, culminating in a written report. A secondary purpose of the program is to provide on-the-job experience and individualized instruction for student counselors for which academic credit is offered.

Contact: Dr. John Kerr, 904/644-4091

Center for Entrepreneurial Studies
University of North Florida

Description: *Activities*—Assists existing and potential entrepreneurs in the management area. Conducts strategic planning and coordinates a number of programs to meet this goal. Included in the center are the Small Business Development Center, the Small Business Institute, the NASA Southern Technology Applications Center, the Program for Government Procurement Assistance, and the Product Innovation Center. Together these units have been responsible for more than $2,000,000 in external funding in the past three years.

Contact: Linda Harris, Office of Public Affairs, Florida Board of Regents, 904/487-2061

Center for Human Resource Management
University of North Florida

Description: *Activities*—Provides direct educational services and assistance to management, employees and their organizations, as well as to other groups involved in building effective and productive organizational and community relations. Ongoing activities support both the on-campus instructional and off-campus public-service programs and contribute to the growth of the region's economy and the well being of its work force.

Contact: Linda Harris, Office of Public Affairs, Florida Board of Regents, 904/487-2061

Center for Organizational Communication Research and Service
University of South Florida

Description: *Goals*—To build links between the business community and the department's instructional programs. *Activities*—Conducts numerous research projects on a contractual basis for businesses and corporations throughout Florida. Has also offered management training programs and speakers' bureaus for major business organizations in Tampa.

Contact: Loyd S. Pettegrew, 813/974-2159 or Arthur Bochner, 813/974-2145

Tampa Bay R & D Park
University of South Florida

Description: *Goals*—To operate a center of research and development combining the resources of the University of South Florida, private enterprise, and federal, state, and local agencies. Dedicated to the principle that research and education are necessary forerunners of industrial growth and development.

Contact: Jack Hennesy, 813/974-2890

University North Conference
University of South Florida

Description: *Goals*—To plan and build a new major urban community of some 20,000+ acres in North Tampa. *Activities*—Makes faculty and university expertise available in the planning process.

Contact: Joseph F. Busta, Jr., 813/974-3810

Small Business Institute
University of West Florida

Description: *Goals*—To provide programs and services to independent businesses to assist in developing the economy in a four-county area of northwestern Florida. To increase the probability of success for new business ventures. *Activities*—Teaches basic business management principles. Provides a confidential business counseling service. Conducts in-depth studies for small businesses seeking management assistance. *Audience*—Potential and practicing small business owners in northwestern Florida. *Innovations*—Special Group Emphasis Center concentrates on needs of minorities and women in business. Procurement Center assists small businesses in obtaining federal, state, county, and city contracts and contacts from private contractors in private sector (university center for the statewide program).

Structure: *Staffing*—Director of SBDC and SBI programs also teaches in Management, two managers (each covers two counties) assistant research scholars, (one of whom teaches management), manager of Special Group Emphasis Center, manager of Procurement Center, business analyst, procurement analyst, administrative secretary, three secretary specialists, one technical procurement specialist, eight graduate consultants, three student/graduate support analysts. *Advisory Board*—Pending, subject to inauguration of College Board. *Funding*—University match, state board of regents, Small Business Administration, Department of Defense, Private Industry Council, private sector (financial institutions). *Program Evaluation*—Goals set for funds used; cost per hour of service rendered; recording of successes by businesses, i.e., contracts won; analysis of increased revenues, profits, and employees for businesses assisted.

Products: *Publications*—"Guide to Management Consulting" (5th Edition), "A Short Guide to Writing a Business Plan," "Selling to the Government," "Steps to Starting a Business," and the outlines and supporting teaching materials for all fifteen different programs, designed and written by SBDC staff. *Awards and Recognition*—Public Service Award, U.S. Small Business Administration, Certificate of National Recognition, U.S. Department of Housing and Urban Development, Project of the Year (Economic Development), The U.S. Jaycees.

Future Plans: Increase assistance to small businesses most likely to create new jobs. Keep in step with national efforts to increase exports. Improve local economic environment for new and relocating businesses.

Contact: Donald M. Clause, Director, 904/474-2910

Georgia

Chair of Private Enterprise
Kennesaw College

Description: *Goals*—To promote objective understanding of the private enterprise system, encourage economic development in the area served by the college, stimulate interaction and coordination between the area's business community and the college, and build the program and reputation of the college and its school of business administration. *Activities*—"You and the American Economy," "Family Business Forum," summer economic workshop for high school teachers, and service to Cobb Chamber of Commerce as relating to infrastructure issues such as roads, highways, and public transit. The chair's service on the Marietta Board of Economic Development and Tourism and as Chairman of Congressman Buddy Darden's Economic Issues Task Force also applies. *Audience*—Varies, but includes business and political leaders, executives with particular businesses, the media, students and teachers, and the public at large. *Innovations*—The Family Business Forum and the Images of Private Enterprise Program.

Structure: *Staffing*—Chair, secretary, and others used in various capacities depending on program needs. At least fifteen other faculty members have been involved in some way in the course of the past year. Student assistants and others are utilized as projects demand and funds permit. *Advisory Board*—The chair does not have an advisory board. Specific programs use advisory boards. In that case, the advisors come from the organizations who sponsor the program as well as representatives of companies who are members of the Forum. *Funding*—Programs such as "You and the American Economy" and "Images of Private Enterprise" essentially fund themselves. Projects such as business histories, the Bell South project, and the Family Business Forum generate surplus funds to support other chair activities. *Program Evaluation*—The chair's activities are evaluated by the dean of the school of business. Specific programs are intensively evaluated by their participants. At the same time, these programs must stand the "market test" in order to continue to attract funding.

Products: *Publications*—Various. *Awards and Recognition*—The chair's work has been recognized by numerous organizations ranging from the Cobb Chamber of Commerce to the Freedom Foundation of Valley Forge and its Leavey Award.

Future Plans: Implement fully the Family Business Forum. Expand "You and the American Economy" to three times annually. Take the "Images of Private Enterprise" program statewide. Further develop the business history efforts through the Cobb County Oral History project and perhaps through additional book length business histories. Continue BellSouth marketing research efforts. Continue summer teacher workshops. Continue writing, speaking, and public-service activities. Most important, to complete the endowment of the Chair of Private Enterprise by raising the total invested from $212,000 to $500,000.

Advice: Learn to live by the expectations and the discipline of the market place and peers in the business community. Typically, colleges have neither the attitude nor the stomach for market-place rigor. Develop impeccable academic credentials and march boldly with them into the market place where ideas must be *implemented* to have value.

Contact: Craig E. Aronoff, Chair of Private Enterprise, 404/423-6045

World Technology Center (WTC)
Southern College of Technology

Description: *Goals*—To provide technical and professional assistance to exporting businesses. *Activities*—Writing and managing technical documentation, writing promotional documents, video production (training, technical, marketing, promotional), training programs (technical, cross-cultural), consulting work, translation and interpretation (Japanese, Chinese, French, Spanish, German, Arabic, Portuguese, Dutch, and more). *Audience*—American exporting business with foreign joint venture, partners, distributors, end users or customers. *Innovations*—The concept of integrating engineering expertise, cross-cultural management, and foreign language skills in international business work. In most cases in which technical documentation, video production, training work, or marketing/promotional work for overseas transactions is performed, one of the three components mentioned above is not provided. The result frequently is a miscommunication of production performance or applied skills related to training. WTC has established a three-pronged process whereby information is accurately given to overseas customers or distributors on installation, maintenance, repair, training, marketing, etc.

Structure: *Staffing*—Executive director, cross-cultural training manager, manager of international operations, manager of Japanese projects, engineering project manager, two support staff. *Advisory Board*—Two boards oversee operations and provide guidance. The advisory board comprises international business executives, government leaders, and academic leaders, as does the Board of Trustees. *Funding*—Half state funds, half generated revenues. *Program Evaluation*—Success indicated by level at which business services increase client's profits and efficiency.

Products: *Publications*—Newsletters; articles in local, regional, and national publications. *Awards and Recognition*—(1) Multiyear grants from Economic Development Administration, U.S. Department of Commerce; (2) Multiyear funding from State of Georgia, State of Florida.

Future Plans: Further expand staff, private foundation affiliation, create several centers of international business assistance.

Advice: For similar programs, obtain multidisciplinary, engineering consulting; foreign language expertise; cross-cultural expertise.

Contact: Gordon Harrison, Executive Director, 404/424-7322

Hawaii

Pacific Business Center Program (PBCP)
University of Hawaii

Description: *Goals*—(1) To strenghthen the relationship and provide an effective bridge between the academic and business communities in the State of Hawaii and the American Flag Pacific Islands; (2) To foster and support increased interaction between the University of Hawaii and private industry, creating research and consulting opportunities for university faculty and local employment opportunities for students and graduates; (3) To encourage and support the commercialization of academic research and the transfer of technology from the university to the private sector. *Activities*—Provides faculty consulting for fees for private businesses and community development organizations. Assists with several university-generated projects becoming business enterprises, the primary example being the Hawaii Biotechnology Group. Has organized a technical assistance program composed of university faculty to assist the Government of American Samoa with the damage caused by Hurricane Tusi. *Audience*—Internally the program seeks to create expanded consulting opportunities for university faculty and works to bring the university and the external community together in meaningful economic development activities. Externally, the program serves the private sector, community-based organizations in need of consulting expertise, and government agencies in Hawaii and in the American Flag Pacific Islands in need of university resources and services. *Innovations*—The program is the only University Center that serves a region outside its state boundaries. The need for technical assistance and educational training programs in the American Flag Pacific Islands is acute and immediate. The PBCP fills this need for the time being. In the longer term, a more effective permanent mode of service delivery will have to be created to serve the ever-expanding economic needs of the Pacific Islands.

Structure: *Staffing*—Director, associate director, secretary, graduate assistant and student helpers. *Advisory Board*—Twelve members. *Funding*—Department of Commerce, Economic Development Administration University Centers Program Grant. *Program Evaluation*—Continued funding requires program assessment and evaluation by EDA. Success of the program is measured by the comments of clients serviced by the PBCP and the faculty who have provided consultant services through the PBCP. Also, the total number of projects taken on in a given year is measured against previous years' totals, and the number of positive outcomes is logged against total projects handled. Another measure of success would be the amount of additional responsibility, including the expansion of the service area, accepted without the concomitant increase in state resources—in other words, the capacity to innovate.

Future Plans: Make the PBCP a permanent part of the Technology Transfer and Economic Development Program. Give it additional responsibilities but also more flexibility to expand its programmatic arm to such areas as Small Business Development and Assistance Programs.

Advice: Find a niche and a need. Find good managers and personnel. Fill the niche and the need. Continuously explore new opportunities and aggressively pursue those that have a 50 percent or greater chance of success.

Contact: Angela Williams, Director, 808/948-6286

Idaho

Idaho State University Business Incubator Center
Idaho State University

Description: *Goals*—To assist new businesses in their development stage to help them become strong local businesses and add jobs to the regional economy. *Activities*—Construction will be complete in the summer of 1988. Current activities include organizing support services, development of policies, development of marketing plan and materials, and formalization of a Technology Transfer Program. *Audience*—Entrepreneurs. *Innovations*—Service will be available in the rural communities as well as in the facility itself.

Structure: *Staffing*—Manager and secretary/receptionist. *Advisory Board*—Fifteen members. *Funding*—Construction: EDA grant, City of Pocatello, Southeast Idaho Council of Governments, Bannock County and Idaho State University. Nonprofit: Management-Idaho State University *Program Evaluation*—New jobs in local/regional economy.

Future Plans: Formulate programs to coordinate all the economic development services available in the eastern Idaho region, especially rural communities.

Contact: Dr. T. L. "Les" Purce, Director, 208/236-2430

Research Park and Economic Development
Idaho State University

Description: *Goals*—To enhance the university's role in the revitalization of eastern Idaho's economy. *Activities*—Works with the communities of the region to identify their strengths and/or weaknesses and develops programs to improve their chances for economic development. Taps the resources of the university to facilitate technology transfer from both the university and the Idaho National Engineering Laboratories into the regional economy. *Audience*—Communities and entrepreneurs of eastern Idaho. *Innovations*—A business incubator is to be completed in the summer of 1988. This facility will be an economic development center for southeastern Idaho.

Structure: *Staffing*—Director, research assistant, office coordinator. *Advisory Board*—Ten members. *Funding*—Funded as a university department through the State of Idaho (nonprofit). *Program Evaluation*—Contacts and individual assistance.

Future Plans: Attract research-type businesses to the Research and Businesses Park to enhance the local economy and increase the research opportunities and capabilities of the university.

Contact: Dr. T.L. "Les" Purce, Director, 208/236-2430

Small Business Development Center
Idaho State University

Description: *Goals*—To support the development of current and future small businesses in southeastern Idaho through direct counseling, training, and management and technical assistance. *Activities—Counseling:* Clients receive management and technical assistance counseling including problem identification, analysis, and recommendations. *Training:* Training seminars are held on various topics of interest to small-business executives (international trade opportunities, cash flow, marketing, etc.). *Audience*—Small-business owners/managers and entrepreneurs. *Innovations*—SBDC will be housed as of the summer of 1988 in the Idaho State University Incubator facility to provide on-site assistance and to serve as a focal point in the region (for small businesses).

Structure: *Staffing*—Director, secretary, various consultants including faculty, graduate students, SCORE representatives. *Funding*—Small Business Administration—25 percent, Idaho State University—50 percent, Small Business Development Center—25 percent. *Program Evaluation*—Quarterly performance recap that includes number of client contacts, number of training sessions/evaluation/performance.

Future Plans: Enhance activities through staff addition and closer coordination at ISU Small Business Institute, ISU Center for Business Research and Services, and ISU incubator facility.

Advice: Funding is key. Results are long-term (not visible in the short run).

Contact: Paul Cox, Director, 208/232-4921

Illinois

Economic Development Programs
Eastern Illinois University

Description: *Goals*—To provide support for local, regional, and state initiatives in attracting new industries and retaining and expanding existing industries. *Activities*—Direct services to individuals and organizations through video communication, consulting, and conferences sponsored by the Community Business Assistance Center, Small Business Institute, and Office of Adult and Continuing Education. Considerable support service in the form of volunteer assistance to local government, local and regional economic development agencies, and the Illinois Department of Commerce and Community Affairs. Promotional videotapes produced, trade missions supported. Students engage in research activities. *Audience*—Ranges from entrepreneurs to elected officials. Most technical assistance directed to business and industry while most volunteer services assist not-for-profit organizations either through board memberships or staff support. *Innovations*—Monday through Friday of each week, five hours of business-oriented television are rebroadcast through EIU-TV which, in turn, supplies area cable systems. The business-oriented programs include regular and special offerings produced by the Financial News Network (FNN) and the American Business Network (BIZNET).

Structure: *Staffing*—Various employees and students of Eastern Illinois University are involved on a need and/or interest basis. *Advisory Board*—

The Lumpkin College of Business has a Business Advisory Board that occasionally has agenda items pertaining to economic development. There are approximately thirty members on the board. *Funding*—Funding for nearly all university effort is of an in-kind nature, primarily from staff salaries and related operating expenses. Funding for the economic development agencies supported by volunteer staff comes from government grants, private-sector contributions, and public fund-raising campaigns. *Program Evaluation*—At present, informal.

Products: *Publications—The Developer* (East-Central Illinois Development Corporation newsletter, published quarterly.) *Awards and Recognition—The Developer* recognized as the best regional newletter by the Mid-America Economic Development Association.

Future Plans: Continue addressing local, regional, and state needs. Implement recommendations adopted by the Board of Governors from its Task Force on Economic Development.

Contact: Ted Ivarie, 217/581-3526

Economic Development Programs
Illinois State University

Description: *Goals*—To link the research interests of ISU faculty to the needs of business and commerce and to state and local governments. To pursue economic development activities in the form of applied research, teaching, and expert consultation that are compatible with the mission of the university. *Activities*—Use of ISU resources to provide local, regional, and economic development services. For example, more than 300 individuals or small businesses have contacted the university during the past two years to receive assistance related to economic development. The university has responded by providing research assistance, prototype development, small business assistance, and commercialization services. These projects have involved faculty in projects such as a robotics training system, holographic application to optical care, isotopic enrichment process, hazardous materials management and training system, bi-radiant oven, and a multi-digit testing program. The university cooperated with the Illinois Department of Commerce and Community Affairs in developing selected components of an incentive package that brought Diamond-Star Motors to the Bloomington-Normal communities. The university hosted a series of programs on Japanese culture. Employment enhancement courses have been offered for individuals in the central Illinois region. The university is administering a Japanese Saturday School for school-aged youngsters of Japanese families residing in Bloomington-Normal. The university is also under contract to provide orientation programs for the newly hired DSM employees going to Japan for training. *Audience*—Higher education community and individuals or groups in the private and public sectors of Illinois. *Innovations*—The planning for and coordination of economic development activities resides in the office of the provost. Service delivery is managed through the college of continuing education and public service. Programmatic support functions are aligned with the academic colleges.

Structure: *Staffing*—Drawn from university. *Funding*—Reallocated institutional funds, grants, contracts, and user fees. *Program Evaluation*—Number of clients served, new business start-ups, patents awarded, income generation, number of faculty involved, research contracts, number of student internships or co-op placements, program recognition by public media and press.

Products: *Publications*—Brochures, annual reports, innovation disclosure documents. *Awards and Recognition*—The Onarga Project, recognized by AASCU; Small Business Institute District Award.

Future Plans: Continue and expand the past record of service to the private sector and accept the challenge of meeting the rapidly emerging needs in Central Illinois. Explore cooperative endeavors with other institutions of higher education in the region and seek additional appropriations to support an expanded economic development program.

Advice: Seek recognition for economic development in the institutional academic plan. Provide a "one-stop" service center for private-sector access to university resources.

Contact: Edward T. Anderson, Associate Provost, 309/438-7018

Business Services Bureau
Northeastern Illinois University

Description: *Goals*—To provide service to the northern and northwestern sections of the Chicago metropolitan area. *Activities*—Provides technical assistance to organizations concerned about issues of management, marketing, accounting, and finance. Through seminars and workshops, as well as direct consulting services, the staff provides assistance in areas that include productivity quality assurance, supervisory skill development, and microcomputer applications. *Audience*—Small and medium-sized business organizations. *Innovations*—Ability to deliver educational programs tailored to organizational curricula and timing requirements.

Structure: *Staffing*—Directed by the associate dean and drawing from the resources of entire business faculty. *Funding*—Tuition and consulting fees. *Program Evaluation*—Criteria are developed to reflect goals of special programs.

Contact: Dr. William Macey, Associate Dean, College of Business and Management, 312/794-2656

Office of Economic Development
Southern Illinois University at Carbondale

Description: *Goals*—To coordinate overall campus economic development activities, to serve as the access point to the resources of the university. To provide leadership in southern Illinois to encourage business retention and expansion, commercialization of new ideas, economic diversification, and improvement of the economic climate throughout the region. *Activities*—Development and implementation of the Southern Illinois Small Business Incubator, a $ 6-million facility that will aid start-up businesses through affordable space, shared general support services, business and technical assistance, and a supportive environment. The facility is scheduled for a 1989 opening. Coordination of Economic Development Network (EDN), a referral service that links incoming calls and other requests for assistance to the campus unit or person able to address the request, using a toll-free number to facilitate access to the university. Provides other information transfer activities through conferences such as the National Innovation Workshop in St. Louis, May 1986, for 250 inventors and the university, and the Economic Development Conference held in St. Louis, July 1986, for fifty-five upper-level administrators; presentations, press releases and television, radio and newspaper interviews; and public relations tools such as brochures, slide shows and special mailings. Administers the Office of Regional Research and Service (ORRS), a university unit that develops and implements programs that link community needs and university resources to address issues cooperatively. Provides leadership on the executive committee and tourism committee of the Southern Illinois Coalition (SIC), a grass-roots, twenty-county organization that promotes regional economic development. Provides general support services such as maintaining the 300-name mailing list and distribution of the minutes. *Audience*—Southern Illinois University staff, faculty, and students, and the people of thirty-four southern Illinois counties. *Innovations*—Office of Economic Development installed and maintains a toll-free number for in-state calls (1-800-854-6479) to facilitate the regional access to university resources.

Structure: *Staffing*—Director, assistant director, research project specialist, two graduate assistants, secretary, student workers. *Advisory Board*—A regional Incubator Advisory Board composed of business professionals and community leaders. The board provides expertise in the development of the incubator operational plan and venture capital funds. It assists tenants in business development problems and aid in the relocation of businesses into the region. *Funding*—OED is a university-funded service program and relies on external funding for construction of the Southern Illinois Small Business Incubator and for the Technology Commercialization Center. *Program Evaluation*—OED compiles achievements of all units that deliver economic development assistance. The data are used to secure continued and expanded funding. OED compiles an annual achievement report and prepares a planning statement for the associate vice president of academic affairs and research (service).

Products: *Publications*—*Connections*, a monthly newsletter; Vinson, Rhonda J. Cropper, Martha and Dougherty, Mary Ann, *Southern Illinois Small Business Incubator Program Plan*, Office of Economic Development, Southern Illinois University at Carbondale, February 1986. Allen, David N. and Dougherty, Mary Ann, *The Business Incubator*

Industry in 1987, a publication of the National Business Incubation Association, July 1987.

Future Plans: Continue research on incubator issues in the U.S.A. and abroad. Finalize plans for venture capital availability to incubator tenants and TCC and SBDC clients. Continue long-range planning for the area adjacent to the incubator to accommodate expanding technology-transfer activities.

Contact: Dr. Rhonda Vinson, Director, 618/536-4451

Office of Regional Research and Service

Southern Illinois University at Carbondale

Description: *Goals*—Develop and implement a university-wide program to match faculty and staff interests and expertise with the needs of the region. To enhance the presence of SIUC in the southern Illinois region and throughout the state by serving as liaison between the university and the region. To develop and administer service programs that link university resources and expertise to specific community needs. *Activities*—Maintains general referral service and outreach program, which facilitate community access to university resources. Develops and conducts research activities related to needs of the region and disseminates information on request (see *publications*). Coordinates university service initiatives such as the United Way and the Illinois Combined Voluntary Health Agencies fund drives. Administers Emeritus College, which utilizes retired faculty in volunteer efforts, and provides staffing for the Annuitant Association. Represents the university on the State of Illinois Rural Affairs Council and the Illinois Institute of Rural Affairs. Developed and will implement an Intergenerational Program to enhance the faculty and professional staff emeriti to assist teachers in the local schools. Administers EC100, a group of professional educators dedicated to the improvement of education in southern Illinois. Serves as liaison to Carbondale Community Education, Inc., a not-for-profit corporation serving as a catalyst for enhancement of community service activities. *Audience*—Political, business, industrial, and community leaders; health, social, and state agencies; public and private organizations and associations; and private citizens.

Structure: *Staffing*—Two outreach directors, secretary. *Advisory Board*—Being formed. Will consist of approximately twelve members from throughout the University. *Funding*—University-funded service program (typically does not generate program income). Some specific projects have been funded through grants. *Program Evaluation*—Qualitative measures used to evaluate projects on a case-by-case basis. ORS director regularly meets with the director of the Office of Economic Development to discuss proposed activities.

Products: *Publications*—*Economic Impact of Southern Illinois Univeristy at Carbondale Upon Nine Counties in the Southern Illinois Region. Southern Illinois: Resources, Problems, Opportunities. Task Force on the Future of Rural Illinois Health Care and Social Services.* *Awards and Recognition*—ORS has received recognition awards from the following: Artrain, a national touring art museum that visited southern Illinois October, 1985; Chautauqua 1986, a traveling art and cultural program that performed on and off-campus to over 3,000 school children, senior citizens, and other special groups; Smithsonian Institute Seminar; United Way; Illinois Combined Health Appeal; Task Force on the Future of Rural Illinois.

Future Plans: Expand outreach services on behalf of the university. Computerize a directory of university service activities and resources so that updated information can be distributed annually throughout the region.

Contact: Neil Dillard, Director, 618/536-7735

Programs for Effective Participatory Systems

Southern Illinois University at Carbondale

Description: *Goals*—To create more effective organizations and satisfying work by encouraging labor-management cooperation and participatory forms of management. *Activities*—Designed, implemented, and facilitated a system of labor/management cooperation for the U.S. Department of Labor in 1986. A nineteen-minute videotape was produced illustrating program implementation that is still used by the department. Designed a participatory approach to safety as a demonstration project for the largest cement-making company in Texas and successfully improved the company's safety record. Worked cooperatively with the Egyptian

Labor-Management Council (ELM) to create a resource center for labor-management cooperation and conduct studies of labor and management leaders concerning their reaction to labor-management cooperation. Conducted training (a two-day retreat) for the Peoria Area Labor-Management Committee (PALM) and advanced training for labor-management cooperation in the steel industry for the Southwest Leadership Council. Currently working under a Southern Illinois Coalition Grant (matched by the ELM and Central Illinois Public Service) to analyze available work force and rates of pay in the southern twenty-county region. *Audience*—PEPS directs its activities to work places and other organizations primarily in the State of Illinois, to improve their efforts through participation and cooperation among its members. *Innovations*—PEPS has created organizational assessment tools that are among the most sophisticated available to judge whether cooperation and participation are an appropriate response, and if so, what form it should take. These diagnostic tools are combined with training in the various areas needed to implement participation and cooperation (assertiveness, communication, conflict resolution, system maintenance, etc.).

Structure: *Staffing*—Director, five graduate assistants. *Advisory Board*—Internal and external boards being established. *Funding*—College of liberal arts provides office space and furniture and a match of grant money for 50 percent of director's salary and benefits. Office of research development and administration provides research assistants' support for FY 88. PEPS generates grant money.

Future Plans: Participate in the State of Illinois's first annual Labor-Management Conference. Continue to strengthen the connections between PEPS and the various area labor-management committees in Illinois. Explore new opportunities to work with area labor-management committees.

Advice: Provide a tool for enhancing the quality of labor-management relations, and its public perception.

Contact: Ronald Mason, Director, 618/536-2371

Small Business Development Center
Southern Illinois University at Carbondale

Description: Established in cooperation with the U.S. Small Business Administration, the Illinois Department of Commerce and Community Affairs, and the SIUC College of Business and Administration, the SBDC offers counseling services to clients at no charge, based upon the extent of services required and availability of resources. *Goals*—To conduct workshops and training on such topics as loan packaging, computer training and tax information, in areas including but not limited to: business plan development, market assessments, cost analysis, financial analysis and capital resources, accounting and bookkeeping, minority enterprise development, business development for women, veterans enterprise development, marketing plan development. *Activities*—Provides general information and in-depth business counseling. Conducts workshops for business-sector participants on such topics as computer use in the small business setting, women-owned businesses, financing, and business planning and development. Assists southern Illinois small businesses through Small Business Institute (SBI) case studies completed by students as part of their College of Business and Administration coursework. Provides business advisory services that result in the creation and retention of jobs. *Audience*—Prospective and current business owners and those requesting business information. *Innovations*—SIUC College of Business and Administration students in marketing classes are frequently used to provide business assistance. This offers SBDC clients practical solutions through classroom projects at no cost to the company while also providing learning opportunities for students.

Structure: *Staffing*—Director, coordinator, business coordinator, graduate assistants, secretary. *Advisory Board*—Twelve members. Funding—Grants from U.S. Small Business Administration and the Illinois Department of Commerce and Community Affairs. The grant awards are matched by the College of Business and Administration and SIUC. *Program Evaluation*—DCCA primarily measures success by the number of jobs created and/or jobs retained, the number of people who receive business counseling, and the quality of the assistance provided.

Future Plans: Obtain grants from the Veterans Administration to train veterans as small business owners and from the Office of Urban Assistance (Illinois Department of Commerce and Community

Affairs) to train unemployed and low-income persons in self-employment and income-enhancing opportunities. Locate the program within the Southern Illinois Small Business Incubator to provide business development assistance to tenant businesses.

Contact: Irene J. Carlton, Director, 618/536-2424

Center for Advanced Manufacturing and Production

Southern Illinois University at Edwardsville

Description: *Goals*—To provide technical assistance and expertise in areas of manufacturing, production, and new product development to manufacturing firms, inventors, and entrepreneurs. *Activities*—In two years of operation, the center has had over 150 contacts resulting in twenty-seven projects that involved more than thirty members of the university faculty. Projects have included prototype development, machine design, carpet manufacturing, dry goods production, food processing, and software package development. *Audience*—Manufacturing and production industries and residents of southwestern Illinois. *Innovations*—Sponsorship of an inventors association "I3"-Illinois Inventors & Ideas.

Structure: *Staffing*—Director, assistant director, two secretaries, graduate assistant, student worker, faculty and staff as needed for specific projects. *Advisory Board*—University Coordinating Committee, four deans; Industrial Advisory Committee, seven members, external to university. *Funding*—Major funding through university budget, additional funds from state Technology Commercialization program. All clients provide funds as part of any project. *Program Evaluation*—New products on the market, new companies developed, new jobs actually created, jobs strengthened, seminars and training sessions, number of new contacts.

Products: *Publications*—Brochures.

Future Plans: Develop a promotional program to increase awareness and availability of services to the people and industries in southwestern Illinois. Expand the involvement of the university faculty and staff in projects, programs, and activities.

Advice: Be patient.

Contact: Gerald L. Bratsch, 618/692-2166

Regional Research and Development Services, Area Development Program

Southern Illinois University at Edwardsville

Description: *Goals*—To provide support services and professional guidance to regional municipal governments, economic development organizations, federal/state government agencies, chambers of commerce, and similar private organizations throughout southwestern Illinois in a continuing effort to improve economic development in the area. *Activities*—Assists regional organizations, local governments and local communities in designing and implementing economic development programs and strategies; conducts investor's tours of the region; identifies and maps business/industrial sites; produces informational brochures relating to tourism, auto parts manufacturing, financial institutions, and transportation opportunities in southwestern Illinois. Collects and disseminates economic development information pertaining to the regional area. Monitors economic development activities within the region and communicates this information to potential investors and other individuals striving to enhance the image of southwestern Illinois. *Audience*—Primarily Madison and St. Clair counties in southwestern Illinois, although some activities have involved other surrounding counties. *Innovations*—Almost all activities are performed on a partnership basis with nonuniversity entities, such as local or county governments, community and/or area economic development organizations, and a regional economic development organization.

Structure: *Staffing*—Associate director, assistant director, research associates, secretary. The number of students participating may vary from quarter to quarter. *Advisory Board*—Area economic development organizations are utilized in lieu of an advisory board. *Funding*—Primarily from the state budget. Supplemental funding generated from clients on a contract basis. *Program Evaluation*—By continuous monitoring of the changes occurring within the regional economy. An annual summary of these changes provides an understanding of the status of economic development within the area. Criteria for success include the program's ability to assist the region in creating a sense of identity and enhancing the image of southwestern Illinois, the success of community development efforts, the degree to which the program is a major contributor to the economic development of southwestern Illinois.

Products: *Publications—1987 Market Review and Investment Update: Madison & St. Clair Counties, Illinois; The Banking Industry in Madison and St. Clair Counties, Illinois, 1985-1986; Private Sector Business Investment in Madison & St. Clair Counties: 1986; Economic Development Assistance Organizations & Assistance Programs; Interstate 225 Development Opportunities Report. Awards and Recognition*—1987 Leadership Council Salute to Southwestern Illinois Award.

Future Plans: Continue to improve and expand economic development services for local communities and other organizations concerned with enhancing the image and viability of southwestern Illinois. Improve program's status as the focal point for economic develoment within the region by encouraging participation from a greater number of university faculty and staff members and students. Develop a closer working relationship with organizations in the Missouri portion of the bistate St. Louis area that maintain similar economic develoment interests and objectives.

Advice: Ensure substantial support and leadership from the university administration. Establish an active and equitable partnership with local organizations concerned with and involved in economic development. Establish credibility with individuals in leadership positions within the area, and assure them that the university is committed to improving the quality of life in the region through its support of economic development activities/programs.

Contact: Dr. Lewis G. Bender, Director, 618/692-3500

Small Business Assistance and Procurement Assistance
Southern Illinois University at Edwardsville

Description: *Goals*—To provide resource information and/or services regarding small business skills, capital formation, and business law. To encourage and develop international trade and marketing and the procurement assistance program. *Audience*—Counties of Calhoun, Greene, Jersey, Macuopin, Montgomery, Fayeete, Bond, Marion, Clinton, Washington, Randolph, Monroe, St. Clair, and Madison. *Innovations*—Small business assistance and procurement assistance to all sizes of business firms of the region.

Structure: *Staffing*—Director, procurement specialist, two graduate assistants, secretary. *Advisory Board*—Thirty members. *Funding*—Southern Illinois University at Edwardsville School of Business and Illinois Department of Commerce and Community Affairs (match of one-for-one required by DCCA). *Program Evaluation*—Quality and quantity of services provided.

Products: *Awards and Recognition*—George Washington Honor Medal from the Freedom Foundation at Valley Forge.

Contact: Arnold Franke, Director, 618/692-2929

Center for Urban Economic Development
University of Illinois at Chicago

Description: *Goals*—To provide technical assistance and research in economic development to community-based organizations and local governments. *Activities*—Policy planning and research on economic development issues of local, regional, or national importance. Industry research to promote industry retention and expansion in the Chicago area. Technical assistance in identifying economic development strategies for community organizations and local governments. Operation of the university's Technology Commercialization Program, which acts as a broker between university faculty and inventors and the business community. *Audience*—The primary constituency consists of community economic development organizations in the Chicago area. An important secondary constituency is economic development policy makers and researchers anywhere. Finally, students in various graduate programs benefit from the professional work experience offered by the program. *Innovations*—The program is one of several dozen EDA-funded university programs and has technical community organizations, rather than businesses, as its primary target group. Further-more, the program blends the traditional university goals of research, teaching, and public service through collaboration with and skills transfer to community organizations.

Structure: *Staffing*—Director, associate director, associate professor three economic development planners, assistant to the director, three support staff members, five research assistants. The Technology Commercialization Program employs another program director, two technical staff members, and three research assistants. *Advisory Board*—Center board, fifteen members; Technology Commercialization Program Board, twelve members. *Funding*—The university provides $100,000 plus space, utilities, etc. The program raises another $500,000 annually from state and local government and foundations, as well as fees for services. *Program Evaluation*—Individual client organizations are asked to complete evaluation forms upon project conclusion. Annually, a large evaluation meeting is convened to discuss the program's work and direction. Key internal evaluation criteria are: number and type of organizatons assisted, number of jobs created, nature of skills transferred, articles published.

Products: *Awards and Recognition*—The founder and first director of the program was appointed Commissioner of the Department of Economic Development of the City of Chicago. The program's success in external fund raising is further testimony to its reputation.

Future Plans: Establish an Economic Development Data Bank to serve regional data needs more efficiently. Continue expanding policy research activities and academic publishing.

Advice: Serve a clearly defined external constituency. Hire a staff separate from regular university faculty to increase flexibility. Strive for excellence: quality is more important than quantity.

Contact: Dr. Wim Wiewel, Director, 312/996-4329

Great Rivers Corridor of Opportunity
Western Illinois University

Description: *Goals*—To assess the strengths and weaknesses of the 21-county region in terms of economic development potential. To develop a strategy for regional economic development. To establish a networking mechanism to promote strategy implementation. *Activities*—A "corridor council" has been formed. Consisting of representatives from the twenty-one participating counties, the council meets quarterly to promote and assess work being done under the direction of the coordinator's office at Western Illinois University. A nationally prominent factory locating firm has been hired to help the group develop an economic development strategy for the region. *Audience*—Public officials and volunteers who work in the area of economic development at the local level throughout the region. *Innovations*—The bringing together of public officials and volunteers to work on a regional strategy.

Structure: *Staffing*—One part-time professional and one part-time clerical person. The university also serves as the recipient of the state grant that funds one-half of the program; hence, the business office provides clerical and accounting help. Twenty-one representatives from the participating counties provide in-kind services to develop and implement local projects funded through the program. *Advisory Board*—The corridor council might be considered an advisory board. It consists of forty-two members, with plans for expansion to eighty-four members. *Funding*—One half from the State of Illinois through a grant from the Illinois Department of Commerce and Community Affairs, the other half from matching funds provided by the participating entities. *Program Evaluation*—The state granting agency evaluates the program once each year.

Products: *Publications*—Newsletter forthcoming.

Future Plans: Continue development of a regional development strategy and continue efforts to promote its adoption (piece by piece).

Advice: A great deal of hand holding is needed to get busy local people to take much time to work on a multicounty development effort. Be prepared to spend much time visiting key individuals not only to get their advice but also to make them feel wanted and involved.

Contact: Dr. Richard Hattwick, Director, Center for Business and Economic Research, 309/298-1594

Small Business Development Center
Western Illinois University

Description: *Goals*—To provide all types of assistance to small businesses throughout West Central Illinois. To use a consultative approach to match resources of the universities located in the region with the needs of small businesses. *Activities*—Serves as coordinator for five additional centers located throughout West Central Illinois. This network has provided business counseling for over 800 entrepreneurs and small business owners/managers. Various types of business training has been provided to over 1,400 participants within the region. Over 127 jobs have been created, 340 jobs retained, and 33 new businesses started. *Audience*—Existing and potential small businesses or entrepreneurs. *Innovations*—The utilization of three community colleges, two chambers of commerce, and one university to deliver the program. Such diversity allows for better coverage throughout the service region.

Structure: *Staffing*—Director of SBDC 1, part-time student assistants, one full-time employee. *Advisory Board*—Ten members. Meets semiannually. *Funding*—The program does not generate revenue. It is funded primarily by grants from the State of Illinois Department of Commerce and Community Affairs. Some money also comes from state appropriations. *Program Evaluation*—Criteria for success relate primarily to job retention and creation. The funding agency makes periodic assessment of the efforts to accomplish these objectives.

Future Plans: Continue developing techniques to foster the growth and viability of small businesses in West Central Illinois.

Advice: Small business development has the potential to create political problems as advice and help is sometimes perceived as favoritism. Maintain confidentiality and integrity to ensure that clients will avail themselves of the services provided.

Contact: Steve Roberts, 309/298-1128

Technology Commercialization Center
Western Illinois University

Description: *Goals*—To identify and support Illinois businesses engaged in high technology and service sector enterprises. *Activities*—Directs research assistance for new venture creations. Conducts general feasibility studies of new venture ideas. Furthers the technical and intellectual skills of the managers and owners of Illinois small businesses. Commercializes technology and research. Develops prototypes and tests new products. Identifies and assists in securing financing. Provides marketing assistance. Assists Illinois inventors in finding Illinois manufacturers to produce and market their inventions. *Audience*—Individuals or businesses in western Illinois. *Innovations*—A network of Small Business Development Centers, business technology centers, chambers of commerce, SCORE groups, community colleges, government procurement centers.

Structure: *Staffing*—Director, part-time secretary, part-time student worker. *Funding*—State grant and match money from clients. *Program Evaluation*—New products or ideas sold to the market. Survey of clients once a year for program evaluation.

Future Plans: Continue regional outreach and try to serve the needs of western Illinois. Create inventors and encourage entrepreneurs.

Advice: Hire aggressive directors with business experience, dedicated to economic development. Make the program hands-on, grass-roots assistance of the ILO-monitoring program type.

Contact: Daniel D. Voorhis, Director, 309/298-2211

Indiana

Center for Entrepreneurial Resources
Ball State University

Description: *Goals*—To serve as the businessperson's contact at the university for business assistance. To coordinate and administer customized training programs, consulting projects, and research activities using the faculty and staff at BSU. *Activities*—Varied. *Audience*—All Indiana businesses. *Innovations*—Flexibility, quick response time to clients; on-line data base inventory of faculty skills and experience; use of interdisciplinary teams of faculty on projects.

Structure: *Staffing*—Director, associate director, two secretaries, faculty consultants hired as needed to perform services for clients. *Advisory Board*—Ball State University Business Forum, twenty-one members. *Funding*—From state legislature and from clients. *Program Evaluation*—Participant evaluations, close contact with clients, peer reviews from other universities in Indiana, extensive repeat business, client testimonials.

Products: *Publications—The Entrepreneur's Guide to Venture Formation, Intrapreneurship and Innovation in the Corporation: An Introductory Guide. Awards and Recognition*—"Excellent Program Award" awarded by central Indiana Chapter of the American Society for Training and Development for Intrapreneurship & Innovation in the Corporation.

Future Plans: Work on more extensive technology transfer projects—perhaps "dormant technology transfer." Look at "employee maintenance agreements," and produce more publications to serve businesses. Obtain more federal contracting. Conduct more new product development.

Advice: Be flexible; be creative; always think of ways that the university can serve—not how it cannot.

Contact: Dr. B. J. Bischoff Whittaker, Acting Director, 317/285-1588

Institute For Business and Economic Development Services

Ball State University

Description: *Goals*—To provide customized training and consulting services and programs for business and economic development organizations and professionals. *Activities*—The administration, operation, grant development, and marketing of economic development programs. *Audience*—Business and economic development organizations and professionals. *Innovations*—The center and academy subcontract with university faculty for training and consulting services and handle all contracting activities, program material development, and program logistics for the faculty.

Structure: *Staffing*—Eight full-time positions: director, Institute for Business and Economic Development Services; director, associate director, Center for Entrepreneurial Resources; director, associate director, Indiana Economic Development Academy; three full-time secretaries, two half-time receptionists, two half-time work-study students, part-time graduate assistants, and secretaries as needed. *Advisory Board*—Twenty-one member group called the "Business Forum." The academy also has its own advisory group. *Funding*—General legislative appropriation from the university. The academy is funded by the Indiana State Budget Committee under the direction of the Indiana Economic Development Council. Both programs generate income that is used to add personnel, develop additional programs, and conduct marketing activities. *Program Evaluation*—The criteria used are the number of training and consulting programs completed and the quality of programs as measured by individual program evaluations.

Publications—*The Entrepreneurial Guide to Venture Formation, Intrapreneurship and Innovation in the Corporation: An Introductory Guide, The Indiana Energy Code Handbook. Awards and Recognition*—Central Indiana American Society for Training and Development, 1986 Excellent Program Award, National University Continuing Education Award, 1985. Program Development Award.

Future Plans: Add more centers to the institute.

Contact: Dr. Frank Sabatine, Acting Director, 317/285-1588

Center for Research and Management Services

Indiana State University

Description: *Goals*—To make available the resources of the school of business and the university to assist in the success of business and industry in Indiana and the region; to provide an avenue for faculty and students to business and industry; to serve as a support service in the school of business effort to secure funding from local, state, federal, and private sources. *Activities*—During the past five years, the center has been active in economic development, targeted industry studies, applied research, consultation, and training. A wide range of services to businesses and industries has included faculty and student services. The Small

Business Institute and economic development resource services have been ongoing programs. During early 1987, center activities included a Management/Technology research project funded by the Indiana Economic Development Council, as well as market feasibility studies, management training, and organizational assessment efforts. *Audience*—A broad spectrum of businesses and industries, as well as the government entities are served. Small businesses, major industries, financial institutions, and nonprofit organizations are included in the service audience. *Innovations*—The integration of several resources to serve many identified needs. In many universities, a "center" is established to serve a narrow purpose or need whereas, at the Center for Research and Management Services, the programs and services are available to serve the needs without the restriction of the requestor's profile. Consequently, CRAMS may mean different services to different audiences.

Structure: *Staffing*—Dean, school of business; director, CRAMS; secretary, CRAMS; assistant director, CRAMS; and four graduate assistants; director THASBDC; secretary, faculty project coordinator. *Advisory Board*—For grants and contracts, advisory boards have been established. Management/Technology Task Force (five members), Terre Haute Area Small Business Development Center (eight members) *Funding*—The university is the primary funding source for the center. Federal, state, and private contracts provide funding for faculty services and offset some of the administrative costs. The program-generated income is used to assist with operating expenses, buy equipment, and provide support for faculty research. *Program Evaluation*—CRAMS reports directly to the dean of the school of business, and the director is a member of the dean's advisory council. Input is received from the dean, associate dean, and department chairs. The center also takes part in the Indiana Economic Development Council, Committee for Higher Education and Economic Development Peer Review process. Other state institutions review the center's programs and offer suggestions.

Products: *Publications*—*Warehouse Feasibility Study* (private use), *Office Supply Business: Competitive Strengths and Weaknesses* (private use), "Organizational Assessment Package" (faculty development) ongoing, *Determination of Advertising Effectiveness* (private use), *An Opportunity Assessment of the Local Educational Market for Computer Services* (private), *Restaurant Feasibility Study* (private use), and *Management/Technology Task Force* (State of Indiana).

Future Plans: Maximize resources to best serve Indiana's needs and provide opportunity to the faculty and students. Intensify efforts to encourage both applied and academic research through the acquisition of grants and private funds. Continue efforts to bring recognition on a local, statewide, and national basis to Indiana State University.

Advice: Don't underestimate the importance of university research centers, funding sources for research and university services.

Contact: William C. Minnis, Director, 812/237-3232

Technology Services Center
Indiana State University

Description: *Goals*—To serve as a catalyst for cooperative projects between Indiana State University and industry. The center has five major goals: to improve the quality of education offered by the school of technology through faculty and student interaction with industry, to provide all interested faculty an opportunity to participate in industrial projects, to develop a reputation as a center of noteworthy research activity, to provide a positive economic impact on Indiana and on the businesses involved with the center, to become economically self-sufficient. *Activities*—A wide range of services, activities, and information for a diverse mixture of people and organizations. Services include identifying and linking sources of technical expertise; providing technical and managerial advice and assistance; assisting with project start-up activities, management, and administration; researching application procedures for grants, contracts, and other funding sources; helping with proposal preparation; maintaining a single, informed point of contact for businesses to access the school and the university; disseminating information about the center, school, and university. In three years of operation, the center has completed eighteen projects and has five underway. Projects cover a wide range of topics but are generally of three kinds: technical problem identification and solution, industrial training development and delivery, and packaging design and testing. Topics addressed have included: CAD system, software design and development, fluid power systems, electronic hardware development, interactive videodisc training systems, quality assurance training, supervisory training, manufacturing assessment, package testing and redesign, and automated manufacturing. *Audience*—University faculty/students and their business/industry counterparts. *Innovations*—The center operates within the university structure but is unlike typical academic units. The fees charged by the center defray expenses of operation. The center uses school faculty and students as primary resources but can seek expertise wherever necessary.

Structure: *Staffing*—Full-time director, assistant director, and administrative secretary, part-time research assistant, and two student workers. *Advisory Board*—Fifteen members representing regional business, state, and local government, selected leaders from the university, and independent citizens. *Funding*—One of the center's goals is to become self-supporting. Currently, the center funds all of its operating budget. The university supports the center by funding the salaries and benefits of the full-time staff. *Program Evaluation*—Performed by a number of faculty involved with the center, with criteria of the percentage of funding generated, amount of funding administered, number of contacts with industry made and maintained.

Products: *Publications*—Proposals, contracts, and reports.

Future Plans: Continue to increase funding administered and service fee base. Provide more opportunity for faculty and student participation. Develop specialty areas for regional, state, and national recognition.

Advice: Get commitment from top university officials for support of activities. Ensure the organizational flexibility necessary for operation. Develop faculty commitment to outside work.

Contact: William J. Foraker, Director, 812/237-3355

Terre Haute Area Small Business Development Center
Indiana State University

Description: *Goals*—To provide a consistently high-quality array of small business assistance that is viewed as highly credible and freely used. The services will foster small business development and growth and result in the improved economic status of the West Central Indiana region served. *Activities*—Housed in the Center for Research and Management Services, School of Business. From this location, resources including faculty, students, the library, and information are marshaled to assist small businesses. Through individual counseling, training programs, literature, and referral, the center serves small business owners and entrepreneurs. *Audience*—Small business owners and entrepreneurs of Vigo, Clay, Putnam, Sullivan, Parke, and Vermillion counties. Often students from high schools and institutions for higher education use the center as a resource for research. Chambers of commerce are often partners in the program services.

Structure: *Staffing*—Director, State SBDC; director, Center for Research and Management Services; secretary; and advisory board. *Advisory Board*—Local business owners, chamber of commerce administrators and representatives from local institutions of higher education (eight members). *Funding*—A federal grant through the Indiana Chamber of Commerce is matched equally by Indiana State University. Little income is generated by the program because most of the services are free. *Program Evaluation*—Recommendations have been made by a student Small Business Institute program audit team to improve service evaluation. The program audit program has been supplemented by a close working relationship with the State SBDC office.

Future Plans: Expand services to cities outside the major metropolitan areas. Provide more education to existing businesses.

Contact: William C. Minnis, Acting Director, 812/237-7676

Industrial Research and Liaison Program
Indiana University, Bloomington

Description: *Goals*—To bring the results of Indiana University research to benefit the State of Indiana in those research areas of importance to business and industry, and to support and enhance the activities of university researchers. To provide business and industry access to the wealth of university talent and equipment. *Activities*—Partners in Applied Research (PAR) projects are low-cost studies with no overhead, designed to provide the research expertise necessary for investigating a research problem of a business or industry that is lacking equipment or expertise present at IU. Research Expo/Technology Exchange conferences provide an opportunity for business and industry to learn about current research and foster contacts. A library of research videotapes is loaned to businesses as an introduction to research at the university. Small Business Innovation Research Assistance (SBIR) helps small businesses prepare proposals to obtain research funds from the federal government. A Patent and License Transfer service assists faculty in patent and license procedures. Researchers Exchange program provides an opportunity for university researchers and business/industry researchers to work in each other's laboratories for six months or more on cooperative projects. The Faculty Consultation Service ties in with the Faculty Research Interest data base and a cadre of faculty assembled to act as a resource for companies needing limited access to the expertise available among the IU faculty. Industrial Associates/Seminar Program consists of biannual or annual seminars given by the faculty in disciplines of interest to Indiana business and industry. *Audience*—All types and sizes of businesses and industries. *Innovations*—Services are flexible in structure to allow business and industry to use not only the knowledge of faculty members but also equipment and laboratories as needed.

Structure: *Staffing*—Four persons, each of whom directs one of the programs offered and has general knowledge and helps in some way with other programs and services. *Advisory Board*—Ten members. *Funding*—The program does not generate income because services are free of charge except in the case of the PAR projects, in which faculty researchers are paid for their services. The program is funded through the State of Indiana and also through the office of research and graduate development. *Program Evaluation*—Number of businesses served and the amount of response by business and industry.

Products: *Publications*—Brochures available on Partners in Applied Research, Research Expo, SBIR Assistance Program, and Research Videotapes. Currently writing a brochure for the State of Indiana through the Department of Commerce on the SBIR program assistance centers.

Future Plans: Expand the office as new needs are recognized in the economic environment. Expand some of the programs currently being offered through conferences, and expand services and participation in statewide objectives.

Advice: Thoroughly investigate the priorities of the state before implementing programs involving economic development. Organize programs with flexibility to meet the changing objectives and needs of business and industry.

Contact: Jeremy Dunning, Director, 812/335-6294

Kansas

Roe R. Cross Center for Business and Economic Development
Emporia State University

Description: *Goals*—To promote and assist in the economic development of Kansas through education, research, and service. *Activities*—Provides professional research and consulting services to businesses, trade associations, and government institutions; develops workshops, seminars, and conferences for continuing education (credit or noncredit); conducts and encourages research activities on business and economic conditions; promotes and increases economic literacy; and improves the climate for business and entrepreneurship. The center is also a coordinating and referral service for full-scale business advice and consultation. Clients are referred to one or more specialists. *Audience*—Kansas businesses and citizens, particularly those located in the Flint Hills region. *Innovations*—Totally a self-supporting entity. Provides teams of consultants and/or research students to assist businesses and communitites in economic development.

Structure: *Staffing*—Director, associate director, secretary. *Advisory Board*—Twenty-two members. *Funding*—From services, private grants and endowments, and other grants. *Program Evaluation*—Programs and/or services are evaluated based on identified goals.

Products: *Publications—Business World,* a quarterly periodical produced in cooperation with the school of business. *Awards and Recognition—* Community for achievement in helping fill vacant buildings in the downtown area.

Future Plans: Expand outreach and linkage between the university and business community.

Advice: Allow adequate time, two to five years, for development of relationships with business.

Contact: Bartlett J. Finney, Director, 316/343-1200 x5308

Small Business Development Center

Emporia State University

Description: *Goals*—To provide information and education to meet the needs of small-business owners, managers, and employees. To serve as a location where small-businesspersons may seek information and task-related solutions for their problems. To cooperate with the Small Business Administration, Service Corps of Retired Executives (SCORE), Active Corps of Executives (ACE), local chambers of commerce, trade associations, and others interested in promoting and developing small businesses. To contribute to the economic development of the region as an integral part of the school of business and the Roe R. Cross Center for Business and Economic Development. *Activities*—Assists small businesses in solving problems in finance, management, marketing, accounting, sales, inventory control, human relations, and organizational development. Offers workshops and seminars on current business topics, supplying information on businesses, associations, economic conditions, and related issues, and developing training aids for successful small businesses. *Audience*—Small business sector of the Kansas economy and citizens of Kansas. *Innovations*—"Out and About" series of programs and services offered at communities through the nine-county region.

Structure: *Staffing*—Director, assistant director, secretary. *Advisory Board*—The Kansas Small Business Development Center has a state advisory board. *Funding*—State, U.S. Small Business Administration, and private funds. *Program Evaluation*—Programs and/or services are evaluated based on identified goals.

Products: *Publications—Centering on Business,* a bimonthly newsletter.

Future Plans: Provide for more one-on-one services and assistance to small businesses.

Advice: Strive to develop linkage between the state agencies, chambers of commerce, small businesses, and individuals.

Contact: Dr. Bartlett J. Finney, Director, 316/343-7162

Institute for Business and Economic Affairs

Fort Hays State University

Description: *Goals*—To enhance the economic vitality of western Kansas. To attract new industry and the creation of new jobs for existing industry. *Activities*—The institute houses the Management Development Center, the Small Business Development Center, and the Bureau for Business and Economic Research. These programs deliver noncredit training through one-on-one counseling of small business owners/managers, and through applied research and publications relevant to economic enterprise in western Kansas. *Audience*—Business owners, managers, and staff.

Structure: *Staffing*—Institute of Business and Economic Affairs director, Small Business Development Center associate director, Management Development Center acting director, Bureau of Business and Economic Research director. *Advisory Board*—School of Business Advisory Council approximately twenty members. *Funding*—State funding for the institution, a federal contract for SBDC services, and fees collected for services. Program income is used to expand services. *Program Evaluation*—Both quantitative and qualitative criteria are applied. The primary quantitative criterion is the number of clientele served. Clientele satisfaction is the qualitative measure applied.

Products: *Publications—Western Kansas Business and Economic Review* (planned). Monographs related to business management.

Future Plans: Expand delivery of current services.

Contact: Robert C. Camp, Director, 913/628-5339

O. Gene Bicknell Center for Entrepreneurship
Pittsburg State University

Description: *Goals*—To provide financial, managerial, and technical assistance to new and expanding businesses in southeastern Kansas and its four-state area in order to assist businesses to improve their managerial capacity, their profitability, and, thus their job creation potential. The center is part of the PSU Institute for Economic Development. *Activities*—Provides contract research in the areas of business plans, feasibility studies, and marketing research. *Audience*—Current and potential small business owners. *Innovations*—One of the few entrepreneurship centers nationwide that provides actual hands-on assistance to entrepreneurs rather than being a primarily academic center.

Structure: *Staffing*—Director, graduate assistant, student secretary. *Advisory Board*—Eleven members. *Funding*—An endowed gift from the founder. The program also generates funds from contract research. *Program Evaluation*—Number of jobs created or retained. Clients are also interviewed 3-6 months after the completion of their project to gauge satisfaction with assistance and to monitor progress toward the recommendations that were provided.

Products: *Publications—The Edge. Awards and Recognition—The Edge* received the "Addy Award" for graphic excellence. This award, presented by the four-state ad council, celebrates the highest standards in advertising communication industry.

Future Plans: To increase contract research.

Contact: Michelle J. Walker, Director, 316/231-7000 x4920

The Institute for Economic Development
Pittsburg State University

Description: *Goals*—To provide one-stop service for financial, managerial, and technical assistance for current and potential small business owners in southeastern Kansas and the four-state area. *Activities*—Activities for FY87 included packaging fifteen loans totaling over $3 million that created or retained 480 jobs in southeastern Kansas. Provided assistance to 387 firms. Sponsored twenty-five training programs for 495 business owners, managers, and employees from area businesses. Additionally, the institute undertakes contract research for businesses and government organizations. Such research projects include feasibility studies, business plans, economic impact analysis and financial evaluation, and pro forma development. *Audience*—Current and potential owners of small businesses in southeastern Kansas and its four-state area. *Innovations*—The unique set of services of the O. Gene Bicknell Center for Entrepreneurship, Small Business Development Center, Mid-America, Inc., Certified Development Company, Kansas Department of Commerce Regional Office, and the Kansas Department of Transportation Community Relations Office.

Structure: *Staffing*—Executive director, associate director, administrative secretary, three student secretaries. *Advisory Board*—Eleven-member board for the O. Gene Bicknell Center for Entrepreneurship. *Funding*—From the State of Kansas, endowment and fees generated from contract research, and fees for packaging and servicing loans. *Program Evaluation*—Number of jobs created or retained, number of firms receiving counseling, number of loan packages approved, dollar volume of approved loan packages.

Products: *Publications—The Edge; Pittsburg State University Business and Economic Review. Awards and Recognition*—Addy Award for *The Edge.*

Future Plans: Make the Center for Technology Transfer a part of the institute. Provide expertise in technological research and application.

Contact: Dr. Richard Hay, Executive Director, 316-231-7000 x4920

Small Business Development Center
Pittsburg State University

Description: *Goals*—To provide management, financial, and technical assistance to existing and new small businesses in the southeastern Kansas ten-county area. The center is part of the Institute for Economic Development. *Activities*—Free one-on-one counseling, low-cost training seminars or workshops, and business information from a variety of sources to clients within the center's service area. *Audience*—Owners and prospective owners of small businesses in the ten-county southeastern Kansas region.

Structure: *Staffing*—Director, field representative, business counselor, counseling assistants, student assistant. *Funding*—Federally funded through the Small Business Administration, and state funded through matching funds and a grant from the Department of Commerce. Income generated by the program is in the form of training session fees which are used to pay the training session expenses. *Program Evaluation*—Measured by client evaluation forms administered by the state SBDC office. Success is based on degree of client satisfaction with the services provided. Success is also measured by the number of clients served, geographical areas served, and program's impact on long-term success of the business.

Future Plans: Reduce response time to client requests, direct more attention to in-depth (twelve hours or more) counseling with clients and serving clients in the primary industries.

Contact: Kathryn Richard, Director, 316/231-7000 x4920.

Center for Entrepreneurship
Wichita State University

Description: *Goals*—To promote an environment that encourages private enterprise and that seeks not only to preserve but also to enhance entreprenurial activities and risk taking. To provide learning atmospheres that improve the entrepreneur's probability of success in new ventures and/or continued success in existing small and large corporate ventures. *Activities*—A special workshop, "Entrepreneurship: Your Future in Business," is offered each summer; this course is designed to provide a view of the American business system through the eyes of entrepreneurs, and to provide information to current and aspiring entrepreneurs to assist them in starting and successfully running their own businesses. Seminars for special interest groups, entrepreneurs and business owners and managers, with an emphasis on defining the opportunities and the problems in entrepreneurial ventures, are offered. A *Business Heritage Series,* designed to preserve, through book-length studies, the achievements of both institutions and individuals who have made significant contributions to this region and the nation, is published. The center is conducting a major research project to learn the effects of entrepreneurial education on new business start-ups and success rates, as well as a profile of individuals who start a business. The center founded, in 1983, the Association of Collegiate Entrepreneurs, an organization dedicated to bringing together the information and resources of the world's entrepreneurially minded young people; the organization is presently working with young people in all fifty states and twelve countries, representing over 250 universities. *Audience*—Prospective and existing entrepreneurs. *Innovations*—The workshop provides a unique learning experience for students by utilizing a multimedia approach, including award-winning entrepreneurial films, formal lectures by noted professors, videotape programs, and presentations and discussions with well-known, successful entrepreneurs and executives.

Structure: *Staffing*—Director, assistant director, national director for Association of Collegiate Entrepreneurs, two staff assistants, and a secretary. Additionally, two professors and a research professor work with the center. *Advisory Board*—Thirteen members. *Funding*—State-provided funding and income from endowments. Some income is generated through sales of books and seminars conducted; income is reinvested in the program. *Program Evaluation*—The center is conducting research on the effects entrepreneurial educational activities have had on new business start-ups and success rates, as well as on profiles of individuals who start a business. Previous research has indicated that over 250 new businesses had been started by students who completed the center's summer workshop program. The success of the Association of Collegiate Entrepreneurs has been measured by the extent to which it has involved young entrepreneurs on a national and international scale.

Products: *Publications—The Complete Information Bank for Entrepreneurships and Small Business Managers and the Business Heritage Series; L. E. Phillips: Banker, Oilman, Civic Leader; The Chandlers of Kansas: A Banking Family; Dane Gray Hansen: Titan of Northwest Kansas; History of the Fourth National Bank & Trust Company;*

Arthur Kincade: Banker, Philanthropist, & Civic Leader; Magic With Sand: A History of AFG Industries; Olive White Garvey: Humanitarian, Corporate Executive, and Uncommon Citizen; Henry A. Bubb: Capitol Federal Savings & Loan Associaton. *Awards and Recognition*—The director of the Center for Entrepreneurship has received a Freedoms Foundation Award for contributions to entrepreneurship and private enterprise development and promotion.

Future Plans: Formalize academic programs for the traditional college community and develop innovative methods to enhance offerings to the nontraditional student client. Formalize the organization and leadership of the Association of Collegiate Entrepreneurs and develop a Young Entrepreneurs Organization. Franchise the "Your Future in Business" workshop program. Construct a separate facility to house the center and the Association of Collegiate Entrepreneurs.

Advice: Ensure strong, dedicated, and innovative leadership. Beware of tension within an academic college, since the activity is nontraditional and not well established as an academic discipline.

Contact: Professor F. D. Jabara, 316/689-3000

Kansas Small Business Development Center
Wichita State University

Description: *Goals*—To be an efficient and effective provider of university-based management assistance to new and existing small businesses throughout Kansas. *Activities*—Activities involve providing business counseling, training, information, and technical assistance to small businesses. One-on-one confidential business counseling by professionally trained consultants is available at no charge to clients. Business seminars, workshops, and conferences on current business topics are presented at convenient times and at low cost for business owners. Procurement technical assistance is available to encourage Kansas businesses to compete for and win government contracts. Current business magazines, books, reference materials, videotapes, and small business data sources are available for SBDC clients. Technical assistance (new product design, invention, and prototype creation) is available to small businesses through a partnership between the SBDC and engineering schools at four state universities. *Audience*—All new and existing business owners who cannot afford to hire management assistance are eligible to receive SBDC services. *Innovations*—Services provided and program structure are similar to most Small Business Development Centers.

Structure: *Staffing*—The Kansas SBDC is a consortium of six state universities, one municipal university, and one community college, with Wichita State University serving as the Program Control Center for the SBDC. Additionally, there are twelve associate centers at state community colleges. The State Office and each center employ a director and provide secretarial assistance. *Advisory Board*—Eighteen members. *Funding*—Provided by the U.S. Small Business Administration, participating institutions, and the State of Kansas. The program generates some income through charges made for seminars, conferences, and workshops; these dollars are reinvested in the SBDC program. *Program Evaluation*—All SBDC clients are asked to complete a study of clients, to attempt to assess the economic impact of services provided. Growth in employment, sales, and profit rates of firms receiving services are compared with overall figures for Kansas business as a whole.

Future Plans: Expand current services so that they are available in all geographical areas of the state. Make the center an integral part of the state's economic development efforts and work with the state's department of commerce.

Advice: For federal government programs requiring a matching contribution, obtain firm and upfront commitment from institutions wishing to participate. Select high-quality personnel. Guard against competing with the private sector in offering services.

Contact: Susan Osborne-Howes, Director, 316/689-3193

Kentucky

East Kentucky Small Business Development Center
Morehead State University

Description: *Goals*—To provide counseling and training programs for qualified small businesses and entrepreneurs throughout twenty-five eastern Kentucky counties. *Activities*—Has provided counseling services to 450 existing small businesses and entrepreneurs. Twenty-four training programs have been conducted with an average attendance of 16.5 persons. *Audience*—Small business owners and individuals who cannot afford to pay for private assistance or those who are located in areas where assistance is not readily available. *Innovations*—The establishment of outreach centers with full-time staff throughout the district. Funds provided by local community groups through grants and in-kind contributions (secretary, facilities, community support).

Structure: *Staffing*—District director, director, Morehead SBDC, director, Ashland SBDC, director, Pikeville SBDC, three secretaries, one graduate assistant, one data processing specialist, one marketing specialist, contractual part-time counselors, one workshop and volunteer retired and active business person. *Advisory Board*—Five members. *Funding*—Federal. University cash, including funds and in-kind contributions from various community programs. All funds utilized for SBDC program operations. *Program Evaluation*—One hundred percent of clients who receive twelve hours or more of counseling assistance are required to complete a questionnaire on the value of assistance provided. Client-provided data are utilized to improve the quality of the service provided and for personnel year-end evaluations. Specific goals, in number of small businesses provided with counseling assistance and training programs to be conducted, are established annually. Job retention, creation, and business funding are priority items.

Future Plans: Continue expansion of the program through local business and community-provided resources at reduced direct cost to the university.

Advice: If the current institution is not involved in the nationwide SBDC network, attempt to establish the service through the SBA regional office.

Contact: Wilson C. Grier, Director, 606/782-2077

Small Business Development Center
Murray State University

Description: *Goals*—To provide management and technical assistance to small business owners and entrepreneurs as a part of the overall Kentucky Small Business Development Center program. *Activities*—Current and continued activities include providing management/technical advice and guidance to small business owners resulting in the creation of full- and part-time jobs and the saving of jobs. In addition, small business owners have attended training sessions that included financing, marketing and record keeping. *Audience*—Small business owners or those planning to start their own business. *Innovations*—Providing one-on-one, confidential, direct counseling advice and guidance for the small business owner in all business disciplines. Circuit rides are made to five cities in the area to provide shorter access to the clientele.

Structure: *Staffing*—One center and sub-center director/consultant, two subcenter directors/consultants, training coordinator/consultant, three secretaries for the three subcenters, two part-time consultants, numerous volunteer consultants. *Advisory Board*—State advisory committee for overall Kentucky program. *Funding*—Murray State University and State Commerce Cabinet. U.S. Small Business Administration. The training program generates a small amount of funds. Fees/charges for consulting services are forbidden by PL 96-302. *Program Evaluation*—Questionnaires are sent on a random basis to those clients receiving in-depth services. Client satisfaction is the criteria for success.

Future Plans: Create an additional fully staffed subcenter.

Contact: Otis H. Erwin, Director, 502/762-2856

Waterfield Center for Business and Governmental Research
Murray State University

Description: *Goals*—To serve as the contact point for the college of business and public affairs continuing education programs, applied research studies, and consultation services. *Activities*—Current activities include: (1) Successful Business Communication seminar, (2) "Hello Asia" workshop, (3) Word Processing with Microcomputers Using Multimate Software seminar, (4) Stress Management seminar, (5) Applications of Lotus 1-2-3 seminar, and (6) Managing Issues of Substance Abuse: Practice and Policy Seminar. *Audience*—Business and government leaders in the university's region.

Innovations—Programs are both customized for individual organizations and generalized for members of several organizations.

Structure: *Staffing*—The sixty highly qualified faculty members from the six departments in the college of business and public affairs staff the Waterfield Center on a part-time basis. The center's director coordinates activities. *Advisory Board*—The Dean's Advisory Council, consisting of twenty-two business and government leaders, advises the center. *Funding*—The center's director and a part-time secretary are funded by the college. Office space is provided. The center produces income that is used to pay for services. *Program Evaluation*—Clients of the services are asked to provide evaluations.

Products: *Publications—Business and Public Affairs.*

Future Plans: Continue to render excellent services to clients in the university's region.

Advice: Listen to the client.

Contact: Dr. John A Thompson, Dean, College of Business and Public Affairs, 502/762-2856

NKU Foundation Research and Technology Park

Northern Kentucky University

Description: *Goals*—To provide resources beneficial to the university and to the companies that develop there. As a developing research university, NKU is able to train its co-op students at the companies' research facilities. At the same time, the companies use the university research facilities and save money on their rent for the length of their lease agreement. *Activities*—The foundation—a nonprofit corporation—is attempting to lease about 75 acres it owns on the north side of the NKU campus. To qualify as a lessee, companies must have plans for research that the foundation's board believes would be compatible with the university's goal. The companies pay low rent on the land they lease but at the end of the lease their buildings become the property of the foundation. From that time on the company leases the land and the building from the foundation. The money generated from the new leases will be the basis for the university's endowment program. In 1982, The Kroger Company built a ten-million-dollar research and development laboratory on 9.5 acres of the park. About 110 persons are employed in the laboratories. NKU students co-op at the facility, and some Kroger employees work as adjunct professors at the university.

Structure: *Funding*—The NKU University Foundation and generated funds.

Future Plans: The Master Plan for the Research Park includes research facilities, office buildings and a conference center with a hotel. It is hoped that the hotel will be a reality in 1988.

Contact: Dr. Ralph A. Tesseneer, Special Assistant to the President, 606/572-6388

Small Business Development Center

Western Kentucky University

Description: *Goals*—To improve the profitability of small business enterprises; to stimulate the development of new small businesses and expansion of existing ones; to promote economic development and improve the climate for small businesses by providing managerial and technical assistance. *Activities*—Serves clients. Assists in developing the resources of the university in aiding the operation of the Bowling Green Innovation Center. Determines the feasibility of expanding the outreach program into the Owensboro & Somerset areas of the state. *Audience*—Small businesses needing managerial or technical assistance.

Structure: *Staffing*—Director, assistant director, secretary. When needed, faculty serve as consultants. *Funding*—Federally funded. *Program Evaluation*—Clients fill out a questionnaire after the consultation, and reports are finished that assess the worth of the aid/advice given.

Products: *Awards and Recognition*—A small business firm given advice by the SBDC was designated in 1987 as a minority enterprise of the year.

Future Plans: Explore possible expansion into other regions of the state. Integrate the SBDC and the university with the new, local incubator.

Contact: Rick Horn, Director, 502/745-3337

Louisiana

Louisiana Small Business Development Center
Northeast Louisiana University

Description: *Goals*—To provide management and technical assistance to potential and existing small business owners in the northeastern Louisiana area. *Activities*—The center provides information, counseling, and assistance to individuals who plan to start or presently operate a small business through one-on-one counseling provided by the center staff and faculty and students of Northeast Louisiana University as well as private-sector resources and volunteer organizations, such as the Service Corps of Retired Executives. Continuing education workshops and seminars are conducted by the SBDC to develop and raise management skills of small business owners and managers. A resource library is maintained that contains SBA publications, statistical information, census figures, start-up manuals, financial ratios, directories, etc. *Audience*—Potential and existing small business owner/managers in the twelve-parish northeastern Louisiana area. *Innovations*—The NLU SBDC served as cosponsor of the first incubator in the state of Louisiana. This program is expected to place several other incubators in the twelve-parish area. Specialized assistance is provided for idea protection—i.e., patent claims. Counselors are available to assist in government procurement.

Structure: *Staffing*—Director, assistant director, small business development specialist, secretary, four part-time graduate research assistants, four part-time student workers, SCORE volunteers, private sector volunteers, consultants. *Advisory Board*—None exists for the Northeast Louisiana University SBDC, although there is one for the state. *Funding*—SBA, Louisiana Department of Commerce and Industry; Northeast Louisiana University, private donations and grants, program income generated through workshops and seminars. *Program Evaluation*—Reports on number of clients counseled, workshops/seminars given, and number of attendees per SBA reporting requirements. Other measures used are number of businesses started, jobs created, loans approved, and research proven.

Products: *Publications—Small Business Guide for Monroe-West Monroe and Northeast Louisiana.* "Northeast Louisiana University Information Brochure," "Small Business Questions and Answers," a weekly newspaper column. *Awards and Recognition*—Pilot program for Small Business Development Center for State of Louisiana. The success of the Northeast Louisiana University Small Business Development Center led the state and SBA to expand the program to twelve other state and private universities.

Future Plans: Continue providing quality technical and managerial assistance to existing and potential small business owner/managers in the twelve-parish delivery area. Expand capabilities for providing assistance in specialized areas such as idea protection and products development, procurement and incubator center development.

Advice: Develop a strong, credible reputation with the business community. Establish a working relationship with area bankers, accountants, attorneys, chambers of commerce, economic development groups, etc. as points of contact and referral. Beware of their capabilities and the capacities in which they can assist their clients and, perhaps more important, their limitations.

Contact: Dr. John Baker, State Director, 318/342-2464

Northeast Louisiana Small Business Incubator System
Northeast Louisiana University

Description: *Goals*—To create new jobs by helping new businesses survive start-up and growth phases. *Activities*—Presently operating an incubator which, after one year of operations, had an occupancy rate over of 60 percent, housing seven businesses. A second incubator is in the planning stages. The system is envisioned as one having 5-7 facilities eventually. Services and equipment are shared by tenants including management and technical assistance provided by an on-site manager and the Northeast Louisiana University Small Business Development Center. *Audience*—Start-up and struggling small businesses are eligible for inclusion in the incubator. The incubators are located in the twelve-parish delivery area of the Northeast Louisiana University SBDC. *Innovations*—The initial incubator was the first business incubator in the State of Louisiana.

Stucture: *Staffing*—Two part-time manager/consultants provide on-site management and technical assistance. Security/Janitorial services. *Advisory Board*—Five-member Executive Committee of the Board of Directors. Also, a network of professionals, business people, and technical people volunteer as needed. *Funding*—State of Louisiana, Gannett Foundation Grant. Rental revenues are generated and charges for specialized services, i.e., copies, computer time, etc. are charged on an "as used" basis. Income is used for general operating expenses. *Program Evaluation*—Number of new jobs created, successful business operation, learning experience for NLU students through SBDC and SBI programs by which senior and graduate students work on a consulting basis with incubator tenants.

Products: *Publications*—"The Northeast Louisiana Business Incubator—Creating Jobs by Assisting Talents and Initiatives" (brochure). "How to Start a Successful Business Through the Northeast Louisiana Business Incubation System" (brochure). *Awards and Recognition*—First business incubator in Louisiana serving as a model that has been researched and toured by developers from throughout Louisiana, Texas, and Mississippi.

Future Plans: Research locations and operating structures for additional incubators. Eventually establish 5-7 incubators throughout the twelve-parish area of Northeast Louisiana.

Advice: Establish a "core working group" of 3-5 people to do research, location analysis, and promotion of the project. Create a board of directors of community leaders who can *assist*—i.e., accountants, bankers, attorneys, technical people, and representatives of area large businesses. Do not put an elected official on the board. If two or more groups are involved in the research, development, and establishment of the proposed incubator, it is essential that all parties involved are willing to work together. The group should always keep in mind that the purpose of their endeavor is a working, successful incubator designed to assist small businesses in the best way possible.

Contact: Miriam Wyatt, Assistant Director, 318/342-2129

Small Business Development Center
Northwestern State University of Louisiana

Description: *Goals*—To link the resources of the university with those of local, state, and federal agencies and the private sector to aid small businesses. *Activities*—Provides one-on-one, short-term and long-term counseling services to small businesses, coordinates and conducts continuing education programs, and serves as an informational resource center. *Audience*—Existing and potential owners and managers of small businesses. The sizes of the businesses served are within standards set by the Small Business Administration guidelines. *Innovations*—Consumer survey of 400 for the city of Natchitoches and Leesville. Surveys described purchasing habits of each city and were distributed at no charge.

Structure: *Staffing*—Two business consultants, graduate assistant, secretary. *Funding*—Small Business Administration and the Louisiana Department of Commerce. Self-generated funds obtained from workshops and seminars used in direct support of the SBDC. The SBDC also funded by Northwestern State University. *Program Evaluation*—Counseling and workshops evaluated by questionnaires completed by clients at the end of their counseling or training sessions. Questionnaires then sent to the Louisiana Small Business Development Center, the state office. Then they are sent on to the SBA in Washington, DC.

Products: *Publications*—"Small Business Guide."

Future Plans: Continue to improve effectiveness of counseling and information services, and develop a broader-based economic development program.

Advice: Be honest with the client. Develop private-sector sources of income. Hire good people.

Contact: Dr. Barry A. Smiley, Director, 318/357-5611

Small Business Development Center
Southeastern Louisiana University

Description: *Goals*—To assist businesses located in the region; to assist businesses that are considering locating in the region. *Activities*—At present, the Small Business Development Center provides assistance for approximately 200 small businesses located in the trading area. The Small Business Development Center also sponsors workshops and seminars for area businesses. The Business Research Unit housed within the college of business is the primary data collection unit for the Florida parishes. *Audience*—Businesses operating in the trade area or businesses that are considering moving or locating in the region. *Innovations*—The Small Business Development Center's primary expertise is in site location.

Structure: Staffing—*Small Business Development Center:* director, secretary, two graduate assistants. *Business Research Unit:* department head, secretary, two graduate assistants. *Advisory Board*—Ten-member Dean's Business Advisory Board. *Funding*—SBI and Southeastern Louisiana University. *Program Evaluation*—Management By Objectives is followed as the means of evaluating the success of the program. The main criteria for success are number of clients, number of sponsored workshops and seminars, and number of consulting projects.

Products: *Publication—Southeastern Economic Outlook,* a quarterly. *Awards and Recognition*—Award of merit from *American City and County* magazine for the establishment of a billing system for Amite City.

Future Plans: Expand the Business Research Unit, taking more of a statewide approach instead of a regional view. Sponsor more seminars and workshops through the SBDC. Establish a Center for the Study of Entrepreneurship.

Advice: Hire people with experience in economic development. Start a publication. Establish a Small Business Development Center.

Contact: Tom Griffin, Director, 504/549-3831

Aid to Inventors
University of Southwestern Louisiana

Description: *Goals*—To promote economic development by assisting Louisiana inventors in bringing their technology to the market place. *Activities*—Working directly with the inventors, the university provides an evaluation of inventions, aid to patents, development and testing of prototypes, and marketing assistance. *Audience*—Louisiana inventors.

Structure: *Staffing*—Director of research and development; additional faculty members serve as consultants depending on the inventors' needs.

Contact: Dr. John Stephens or Steve Killingsworth, 318/231-6517 or 318/235-6963

Industrial Incubators Program
University of Southwestern Louisiana

Description: *Goals*—To provide technical assistance and temporary space to beginning business owners as an aid to start-up. *Activities*—Three Louisiana industries have been housed in university facilities for technical assistance and research space. Prototypes have been designed and constructed, with testing and design assistance provided by university faculty and staff. One of these industries has now constructed and moved into its own $2-million facility located in a nearby industrial park. *Audience*—New businesses interested in locating in the region.

Structure: *Staffing*—Director of research and development, vice president for administrative affairs.

Contact: Dr. Wayne Denton, 318/231-6775

Louisiana Productivity Center
University of Southwestern Louisiana

Description: *Goals*—To revitalize 30-50 Louisiana manufacturing industries, to serve as an industrial extension service for CAD/CAM technology, to help Louisiana industries open new markets. *Activities*—With a $1-million grant from the Louisiana legislature, the center has hired project engineers and federal procurement specialists. This team visits client companies and makes recommendations for administrative structuring, hardware and software acquisitions, design of new products, manufacturing procedures, and marketing. Procurement staff match federal government needs for manufactured products with the capabilities of Louisiana industries. They also work with industries in filling out the necessary documentation to bid on government work. *Audience*—Manufacturing industries throughout Louisiana. Many are companies that historically have fabricated products strictly for the oil industry but could also successfully supply a great many federal procurement needs. *Innovations*—Few centers of this kind exist. The Louisiana Productivity Center utilized a $5.3-million "factory of the future."

Contact: Dr. John Stephens or Steve Killingsworth, 318/235-6963

Maine

The New Enterprise Institute (NEI)

University of Southern Maine

Description: *Goals*—To create, test, and implement economic development mechanisms designed to foster employment and income growth and to increase the capacity of entrepreneurs and small- to medium-sized enterprises to manage innovation and change. In addition, NEI assists the university in articulating and implementing an economic development strategy that reaches out to public, nonprofits, and private-sector enterprises and enhances the quality of life for Maine citizens. *Activities*—Technical assistance, feasibility studies, applied research, training, evaluation studies, and productivity enhancement analysis to all economic sectors in the state. NEI also performs a linking function between sources and users of entrepreneurial and technology-related information. *Audience*—Although NEI focuses particular attention on projects related to entrepreneurial activity, innovation, and technology, no organization whose activities influence the economic development of the state is considered ineligible for NEI assistance.

Structure: *Staffing*—Director (part-time), two research associates (part-time), one senior economist (half-time), one secretary (full-time). *Funding*—EDA. Program generates minimal income, used to offset additional program expenditures. *Program Evaluation*—Jobs created, jobs saved, capital attracted to ventures, other economic activities performed.

Products: *Publications*—Many. *Awards and Recognition*—G. Theodore Mitau Award for Program Excellence.

Future Plans: Phase out EDA centers over five years old.

Advice: Secure firm commitment from sponsoring university for support in addition to that provided by the federal government. Be sure to avoid apparent duplication of services with other economic development programs, such as SBDCs.

Contact: Dr. Richard J. Clarey, Director, 207/780-4420

Massachusetts

Southeastern Massachusetts Partnership

Southeastern Massachusetts University

Description: *Goals*—To promote regional economic development. *Activities*—The partnership is a regional development corporation with the mayors of five regional cities and the president of Southeastern Massachusetts University as its board of directors. A national search for a director of the partnership is currently underway. The director and staff will be housed at the university and responsible for promoting an intensive regional effort to attract and retain business and build a better quality of life for the area. *Audience*—The people of southeastern Massachusetts. *Innovations*—This is a unique model in Massachusetts, and possibly in the country. The organization is designed not only to promote economic development but also to encourage regional cooperative efforts at the grassroots level.

Structure: *Staffing*—One director, two research assistants, and one secretary. *Advisory Board*—The mayors of Attleboro, Brockton, Fall River, New Bedford, and Taunton, and the president of Southeastern Massachusetts University. *Funding*—City, state, and private money is being used. *Program Evaluation*—The board of directors established a list of specific objectives, with evaluation measures incorporated.

Future Plans: Create and maintain a quality, long-term, flexible organization designed to meet the changing needs of the region.

Advice: Hire a trainer/consultant with skills in group problem solving. Keep the group small and focused.

Contact: John R. Brazil, President, 617/999-8004

Center for Economic Development
University of Massachusetts-Amherst

Description: *Activities*—Assists communities and community groups seeking to enhance economic stability and diversity. Conducts economic, real estate, and other market research, and develops strategies for attracting, retaining, and cultivating business and economic activity. *Audience*—City and town governments, nonprofit corporations and groups.

Contact: Samuel N. Seskin, Director, 413/545-4395

Community and Resource Development
University of Massachusetts-Amherst

Description: *Activities*—Provides information, education, analysis, and access to technical assistance in topics that include economic development, policy formation, and public decision making, water quality and waste management, and environmental policy. Educational materials and programs are available through agents and specialists in Cooperative Extension offices in all counties of the state as well as at the university. Highly specialized and state-of-the art knowledge can be accessed at other universities, the U.S. Department of Agriculture, and other research agencies and organizations. *Audience*—Active and interested citizens, local and government officials and employees, public interest and citizen groups, state agencies, owners/operators of all types of businesses.

Contact: Rick Feldman, Program Director, 413/545-0027

Michigan

Center for Entrepreneurship
Eastern Michigan University

Description: *Goals*—To encourage, support, and foster entrepreneurial activities. *Activities*—Presidents' Forum, a membership and support group for CEOs of companies whose gross income (annual sales) exceeds $5 million. *Audience*—Company executives of high-growth industries who are concerned about managing growth.

Structure: *Staffing*—Director of center, director of research and program development. *Advisory Board*—Sixteen members and one ex-officio. *Funding*—President's forum members, Michigan Department of Commerce, Community Foundation for Southeastern Michigan, EMU.

Contact: Dr. Patricia Weber, Director, 313/487-0225

Higher Education Consortium for Economic Development
Eastern Michigan University

Description: *Goals*—To work with local business, government and community leaders on economic development projects with strategies. To coordinate college and university resources to contribute to economic development. *Activities*—Encourages the five colleges and universities of Washtenaw County to locate activities or facilities in the Ypsilanti area. Provides consultants from the faculties of the participating institutions to aid local government and the business community. Supports economic development activities in the Ypsilanti area (e.g., currently sponsoring the Ypsilanti Area Industrial Survey with the chamber of commerce and Michigan Bell Telephone). *Audience*—State and local government and business officials and organizations. *Innovations*—The program joins together the resources of five institutions—Cleary College, Concordia College, Eastern Michigan University, the University of Michigan, and Washtenaw Community College—through one organizational mechanism.

Structure: *Staffing*—Chair, graduate assistant, secretary, consultants. *Advisory Board*—Five consortium committee members, one from each participating institution. In addition, the five college and university presidents provide overall direction through the Washtenaw County Higher Education Consortium. *Funding*—Annual contributions from the five participating institutions and the State of Michigan. *Program Evaluation*—Community response, number of projects and participating faculty members, progress in local economic development as measured by changes in property inventory and industrial commitment.

Products: *Publications*—"Report of Activities."

Future Plans: Computerize a faculty consulting data base for the five institutions. Computerize the Ypsilanti downtown property inventory. Expand the number and extent of consultant contributions. Participate in the economic development activities of the chamber of commerce, Downtown Development Authority, City of Ypsilanti, Mainstreet Program, Washtenaw Development Council, and related organizations.

Advice: Work with existing organizations; do not operate in a vacuum. Look for gaps in the program or personnel of existing organizations; use university resources to address the situation. Maintain a stance of support for activities to reduce feelings of threat or fears of take-over.

Contact: Charles M. Monsma, Chair, 313/487-0243

Institute for Community and Regional Development (ICARD)

Eastern Michigan University

Description: *Goals*—To use the faculty and other resources of the university to aid local governments and business organizations in economic development and applied research efforts. *Activities*—Publishes *Michigan Economic Developments*, semi-annual regional economic review, and forecast newsletter; sponsors Michigan Economic Forum, an annual seminar. Evaluates the economic effects of plant closings, funded by the State of Michigan Research Excellence Fund. Hosts the Higher Education Consortium for Economic Development, the five colleges and universities of Washtenaw County. Facilitates various applied research and consulting efforts in areas such as environmental protection, personnel management, and general public policy. *Audience*—Officials of state and local governments and business organizations, especially those working in economic development activities. *Innovations*—ICARD serves as a central coordinating structure between the university and organizations able to use the faculty expertise. The role of ICARD is one of liaison, project development, and logistical support for project implementation.

Structure: *Staffing*—Director, three associate directors, five project directors, five project staff, two graduate assistants, two clericals. *Funding*—Base support from the general fund of the university. Majority of the funding from clients on a contractual fee-for-service basis and from the state government through grants. Recovered overhead contributes seed money for additional project development. *Program Evaluation*—Individual projects have internal evaluation components based on research measures and client response. The overall program is evaluated by changes in number and type of projects carried out as well as by community feedback.

Products: *Publications—Michigan Economic Developments*, published twice annually; "Economic Assessment of Recycling Activities," 1987; "Assessment of Personnel Policies and Procedures: Ypsilanti Township," 1987; "Cross Street Revitalization," 1985; "Ypsilanti Area Government Data Study," 1985; "Ypsilanti Township Mass Transit Needs," 1985.

Future Plans: Continue to broaden the range of activities carried out, both geographically and in terms of substantive project fields. Continue to work on econometric modeling of the effects of plant closings. Serve a liaison function among those who are doing regional econometric modeling throughout the State of Michigan.

Advice: To generate applied research projects, place program development emphasis on doing need assessments with government and business officials, in an attempt to negotiate single-source contracts; correspondingly, put less time and effort into responding to competitive RFPs.

Contact: Charles M. Monsma, Director, 313/487-0243

Manufacturing Resources and Productivity Center (MRPC)

Ferris State University

Description: *Goals*—To conduct research and development and to provide technical assistance and specialized manufacturing engineering training. *Activities*—Brokers all of the faculty and facilities of the Ferris State College's school of technology to industry. The MRPC can also broker the services of the other six schools on campus. The school of business, allied health, school of optometry are currently doing product design, consulting, training, and leasing space to one incubator company.

Audience—Michigan industry. *Innovations*—MRPC has 9,000 square feet, prototype manufacturing capability, microcomputer lab, two classrooms and four visiting faculty offices for on-site technical assistance. It can also deliver technical assistance and training on site. All programs are customized to the clients' requirements.

Structure: *Staffing*—Six full time. Four engineers and two support staff have contracted last year with thirty-one faculty and consultants and hired thirty students from school of technology to assist with contracts with industrial clients. *Advisory Board*—Twenty-two industrial CEOs and/or managers. *Funding*—Base funding from the Ferris State College general operating fund. Projects must be self supporting. Income generated from projects used as seed money to do R&D, MRPC funded projects. *Program Evaluation*—Submitted goals and budget on a yearly basis, reviewed by Board of Control, Administration, and Industrial Advisory Council.

Products: *Publications—AUTOCAO Multilayered Pears Layout Package Wells Manual* (users manual). *Awards and Recognition*—Received $150,000 grant from Michigan's Research for Excellence Fund.

Future Plans: Continue to expand services.

Advice: Make sure program is well funded and has full administration support. Appoint a good advisory council.

Contact: Steve Hickel, Director, 616/796-3100

Office for Economic Expansion

Grand Valley State University

Description: *Goals*—To assist with economic growth in West Michigan, providing faculty, staff, and student involvement in business and industry activities, and contributing to the public-service role of the college. *Activities*—Instrumental in establishing a seven-college consortium to assist business and industry (CCABI). Established a computer lab for use by business and industry. Conducts on a yearly basis "The Entrepreneurship Institute," a two-day in-depth seminar to assist emerging entrepreneurs. Offers broker consulting services (for instance, management marketing, human resources) for business. Provides financial resource development for start-up and emerging companies, including a computerized matching service for investors and entrepreneurs and a venture capital club, as well as loan-packaging services that include financing from lending institutions as well as public sources (state and federal). Conducts economic data base research. *Audience*—Business and industry. *Innovations*—The focus on the company as client as the public-service role implementing economic development of GVSC. The Office for Economic Expansion is unique in its cooperation with six other colleges to bring services to business and industry. OEE is also a partner in the Small Business Assistance Network, a group of chambers of commerce and other economic development agencies that assist entrepreneurs and emerging companies as well as established firms.

Structure: *Staffing*—Director, assistant director, manager of contract programs, project coordinator for Stow and Davis properties, economic base researcher. *Funding*—Start-up funding for the program was received from the State of Michigan. The program is now part of the college's base budget. In addition, the program generates revenue through the contract program area, which is used to cover overhead for the contract programs manager. State grants to provide service in financial packaging to state clients and joint research projects have provided additional dollars. *Program Evaluation*—Number of contacts generated, number of jobs created, number of clients served, new programs created.

Products: *Publications*—Several.

Future Plans: Develop Stow & Davis property to establish an R&D Center as well as a manufacturing incubator. Establish an international trade center.

Advice: Be aware that a program of this type cannot function in a vacuum. Success depends on becoming a member of the overall economic development community.

Contact: Douglas Smith, Director, 616/242-6634

Northern Economic Initiatives Center

Northern Michigan University

Description: *Goals*—To identify and utilize Northern Michigan University faculty and staff resources to institute programs for creating new export markets, transferring production technology, replacing imports with locally produced products, accessing venture capital, providing business counseling and conferences, and originating research in Michigan's Upper Peninsula. *Activities*—Creates new export markets. Has catalyzed a new wholesale distribution system for locally manufactured items for the regional and national gift and retail industry. Has developed a technology deployment program for a micro manufacturer moving from custom production to manufacturing. Has established Upper Peninsula Venture Capital Network, organized to bring together informal investors and entrepreneurs. Provides enterprise training and conferences for small businesses. Conducts research and provides data in order to leverage private-sector investment. *Audience*—Public and private-sector groups, including micro-businesses, manufacturers, and industries currently located or planning to locate in the Upper Peninsula. *Innovations*—Direct outreach and networking with the existing economic development infrastructure, including area universities, economic development corporations, and private industries.

Structure: *Staffing*—Director of NEIC and consultant to the university for economic development, director for the Small Business Development Center, micro-business promotion manager, economic development research coordinator. *Advisory Board*—Food Processors Advisory Board, fourteen members. Upper Peninsula Venture Capital Network Advisory Board, six members. *Funding*—The Northern Economic Initiatives Center is supported by the State of Michigan Research Excellence Fund. The Small Business Development Center is supported by the Small Business Administration and the local Private Industry Council. *Program Evaluation*—Clients are required to fill out evaluation forms for training. Success is measured in how well a business performs after receiving training and counseling whether a planned venture actually takes place, or by periodically surveying clients about their satisfaction with the programs.

Products: *Publications*—"An Analysis of Gift and Novelty Product Markets in the Upper Peninsula of Michigan," 1985, "Upper Peninsula Visual Artists and Craftsperson Profile," 1986, "A Marketing Profile of the U.P. Lodging Industry," 1987. *Awards and Recognition*—Michigan Small Business Centers and Michigan Small Business Development Center "Special Project Award" for 1987. Director served as delegate to the White House Conference on Small Business, 1986.

Future Plans: The Tourism Market Share Program sponsored by the Northern Data Research Institute represents the first cooperative data-gathering system designed to provide information and feedback to the tourism industry of the Upper Peninsula. Over sixty-five Upper Peninsula food processors are being organized to develop strategies to increase the awareness of U.P. foods among the local buying public. A concurrent project enlists Upper Peninsula media to deliver a public-service campaign. An urban market presentation of area produced products to increase market exposure is planned for a major downstate gallery. Invited will be corporate and gallery buyers, architects, and interior designers.

Advice: Base university endeavors on a well-stated philosophy or strategy. Communicate this strategy and relate it to the current economic condition of the region or area you hope to serve.

Contact: H. Richard Anderson, Director, 906/227-2406

Oakland Technology Park and Oakland University Center for Economic Development and Corporate Services

Oakland University

Description: *Goals*—To help shape technological growth, as well as economic growth for the city, county, and state. To find opportunities to blend humanity with technology and to restate the university's fundamental role of preparing students for a complex and changing world. *Activities*—Many. *Audience*—Businesses that would like to associate with a progressive university, students and faculty who can join with business to advance technology and state and local government to view the university role as helping economic development. *Innovations*—The resulting partnership is unique among universities affiliated with technology parks in the country. "We're educators, not land developers or marketing experts," said President Champagne. Although Oakland University plays a key role in this development, the university does not own the land, nor is it charged with developing or marketing the park. Oakland University has been the catalyst in bringing together the partners in one of the few successful U.S. parks in the past few years. The Oakland Technology Park is destined to be the sixth-or-seventh largest technology park in the United States in size and investment dollars by 1992.

Structure: *Staffing*—Director, Center for Economic Development and Corporate Services, secretary, and graduate student. *Funding*—Only for the Center for Economic Development and Corporate Services.

Products: *Publications—Links with the Oakland Technology Park: A Proactive Strategy that is Working;* "ISPIM Forum—University of Sussex and Brighton Business School," Brighton, England. *Awards and Recognition*—University president is board member of the Association of University Related Research Parks.

Future Plans: Develop university property in conjunction with the needs of the technology park, e.g., incubators, child care center, convention facilities.

Advice: There is another way for universities and colleges to bring businesses together with higher education without investing money, land, and energies of the universities: use businesses and developers to develop technology parks, etc.

Contact: Frank P. Cardiman, Jr., Director, 313/370-4090

Business and Industrial Development Institute (BIDI)
Saginaw Valley State University

Description: *Goals*—To identify available patented technology, develop it jointly with regional small business, and assist in its transfer. To create and present approximately eight one-day conferences for regional small businesses. To coordinate a regional small business network. *Activities*—Has developed a comprehensive program for bringing patented technology into East Central Michigan so that it might be assimilated by regional small businesses to enable them to expand and diversify. This program started four years ago with little funding and minimal staff. Since then it has become a national and international model. BIDI was the first in Michigan to create the Saginaw Valley Entrepreneur Club, a networking program. Attendance at monthly programs ranges from 60 to 120. The idea is being copied elsewhere in Michigan. *Audience*—Small business, as defined by the U.S. Small Business Administration. Farming is included. *Innovations*—A comprehensive program of technology development and transfer at a small college campus is in itself unique. In addition, BIDI is initiating a program for disseminating technology throughout the State of Michigan with help from the Michigan Technology Council, Regional Community Growth Alliances, and the Michigan Technology Transfer Network. BIDI provided the first business-oriented programs for farmers in Michigan.

Structure: *Staffing*—Director, assistant director, research coordinator, administrative secretary, office manager, budget supervisor, two part-time contract workers, two student assistants, faculty and other students as needed for lab development. *Advisory Board*—The director reports periodically to the president and vice president of Saginaw Valley State University. Reporting is done less frequently, as needed, to the Board of Control. *Funding*—A special appropriation from the Michigan legislature to the college's general fund, BIDI's share for SVSC's Research Excellence Fund for Michigan legislature, an ongoing SBA/SBDC grant, program revenue. *Program Evaluation*—Technology development and transfer success are measured by the number of technologies transferred, new businesses created, etc. Conferencing and networking success is most easily measured by the registrants' return over and over again for other BIDI activities and by attendance at events.

Products: *Publications*—"Dormant Technology Transfer from Corporation to Corporation, Final Report to the U.S. Department of Commerce," Economic Development Administration, Office of Technical Assistance. "Entrepreneurial Training and Education," *Michigan Business*, September 1987. *Awards and Recognition*—Special Projects Award, 1987 to Saginaw Valley University SBDC from U.S. Small Business Administration and Michigan Department of Commerce.

Future Plans: Expand the technology transfer program to include more transfers throughout the state. Create and coordinate regional small business conferences in collaboration with various economic development groups in the region and state. Create and administer a new patent policy for SVSC.

Advice: Technology transfer without associate development is not effective. This development is labor intensive and proceeds slowly. Don't attempt it without adequate resources and a detailed plan.

Contact: Dr. Leonard F. Herk, Jr., Director, BIDI, 517/790-4048

Institute for Technological Studies

Western Michigan University

Description: *Goals*—To enhance the economic development of southwestern Michigan through collaborative service, training, and research efforts with industry. To provide administrative support for internal and external research activities of the college. *Activities*—Makes on-site visitations at regional industries to assess areas of potential collaboration. Hosts reciprocal visits of industry to campus to show capabilities and facilities. Develops and delivers on-site industrial training and education programs. *Audience*—Primarily small to medium-sized industries, occasionally, area government agencies. *Innovations*—No risk, no obligation, free assessment of problems.

Structure: *Staffing*—Currently a minor portion of associate dean's duties. Future uncertain. *Funding*—Income generated is primarily used to cover direct costs, with any residual used to develop and/or fund faculty research.

Future Plans: Budget reductions are forcing a reallocation of positions that leaves the future of the institute uncertain.

Advice: Avoid the temptation to start activity without adequate funding; i.e., as part-time for an administrator. Avoid a highly structured set of "rules" for relationships (compensation, etc.) with participating faculty. Do not allow caps to be placed on total faculty compensation.

Contact: James B. Matthews, Dean, 616/383-6040

Regional Education and Economic Development

Western Michigan University

Description: *Goals*—Provide graduate and undergraduate instruction, research support, and professional expertise to assist in the region's economic development. *Activities*—Maintains and establishes graduate and undergraduate degree programs, with direct responsibility for off-campus sites, to meet area professional/technical training needs. Promotes and implements the university's participation in regional economic development efforts. Develops means of linking regional economic needs with research and technology capacities of the university. Promotes and develops advanced professional training for the public sector. *Audience*—Leaders and managers of business, industry, and private and public services and agencies in West Michigan, and their professional, managerial, and technical employees. Administrators, faculty, and professional staff of other area educational institutions. *Innovations*—Among recent innovations are: inauguration of new graduate mechanical and industrial engineering programs, with an off-campus master's program inaugurated in the Benton Harbor-St. Joseph area in Fall 1987 through cooperative efforts between local industry, Lake Michigan College, and the college of engineering and applied sciences and the division of continuing education at MWU; increased participation in area economic development efforts in the Grand Rapids area through active university representation on the College and Technology Center of West Michigan; designation of the Office of Public Service (WESTOPS) as the center for the Michigan Technology Transfer Network; initiation of the Advanced DNR Leadership Academy, two-week long training seminars conducted for the Michigan Department of Natural Resources by the WMU Center for Public Administration Programs and the division of continuing education.

Structure: *Staffing*—Total regular staff: eighty. *Funding*—University general fund. *Program Evaluation*—Increased participation by the units of the university in economic development activities in western Michigan.

Future Plans: Convene a regional economic development conference at the university.

Contact: Richard T. Burke, Vice President, 616/383-0685

Minnesota

Small Business Development Center
St. Cloud State University

Description: *Goals*—To foster rural economic development and development of specialized small business initiatives, such as area international trade and government procurement by area businesses.

Activities—The primary activities of the SBDC fall into three distinct categories: direct consulting, educational programs, and small business research. Direct consulting consists of a free management assistance program targeted at helping rural area entrepreneurs and communities develop and expand their current small business workshops, and small business research is conducted based on client's needs. *Audience*—Rural entrepreneurs and small business communities located in the fifteen-county Central Minnesota area. *Innovations*—Rather than utilizing a "Band-Aid" approach to economic development, the program has placed strong emphasis on long-term business assistance that stresses timely and periodical follow-up to provide true economic benefit.

Structure: *Staffing*—Full time program director, secretary, three part-time graduate research assistants, approximately 100-150 private sector consultants employed contractually as needed. *Advisory Board*—Results monitored by a state SBDC office via program audit including survey and personal interview of past clientele and communities serviced. *Funding*—Matched funding program wherein SCSU and the U.S. Small Business Administration provide the bulk of program funds. Several incidental grants are also occasionally received from local area grantors. Funding is regulated by a state administrative office. Majority of services are free; however, various educational programs have cost-associated fees. All incomes generated are reinvested in the program. *Program Evaluation*—A periodical in-depth review made by the state administrative SBDC office utilizes the following criteria to evaluate the program: area economic impact—jobs created, loans processed, new businesses started, degree of networking with community and private-sector resources, level of client satisfaction based on mail and personal interview surveys.

Products: *Publications*—A complete library of over 500 business development aids is available. These publications consist of SBA materials and various small business research articles generated by the program. *Awards and Recognition*—In 1985-86, recognized as an Outstanding Non-profit Community Assistance Program by "America Can!" as sponsored by the American Can Company.

Future Plans: Increase specialization in rural industrial development and agricultural alternatives by making the program more visible in rural small business communities. Espouse a "cradle-to-grave regeneration" process of rural community economic development, helping rural areas become economically independent.

Advice: Two words sum it up: coordination and cooperation. Because of the complexities of interests in area economic development, it's vital that all interests learn how to work together, each complimenting rather than reinventing the other's efforts.

Contact: Richard Dunfee, 612/255-4932

Missouri

Center for Technology and Small Business Development
Central Missouri State University

Description: *Goals*—To increase public awareness of the program, to increase training opportunities, to provide the best possible combined package of technology and business management assistance to clients throughout Missouri. *Activities*—Provides assistance to new and existing businesses, helping them become more efficient, productive, and profitable, and thereby stimulating and strengthening Missouri's economy. Statewide, the center provides technical support services, such as applied research, industrial training, product testing, and technical consultative services. Some of these services include energy audits and conservation plans, new product development, plant layout and materials handling, as well as training seminars and workshops. *Audience*—Clients throughout the state, including potential and new entrepreneurs and people in business and industry. *Innovations*—Upon receiving a request for assistance, a center coordinator conducts a preliminary investigation of the client's situation to determine the best approach for solving a problem or providing assistance to improve the client's business. Then, as required, experts are called in to examine the client's situation and to make recommendations. After a discussion of the recommendations and methods of implementation, the client incorporates the assistance received into the business. Later, the center conducts a follow-up check.

Structure: *Staffing*—Seven full time, including a director, coordinator for small business development, coordinator for technology development, engineering consultant (mechanical and industrial), engineering consultant (electrical), and two secretaries. In addition, the center can obtain consulting services from the university or hire outside consultants. *Advisory Board*—Ten members. *Funding*—Federal Small Business Administration and Central Missouri State University. Client services are generally free; workshops are conducted on a cost-recovery basis. *Program Evaluation*—Self-evaluation and critique methods examine program goals and progress toward them, quality and appropriateness of services to business and industry in line with guidelines set by the Small Business Administration, and direct feedback from clients plus follow-up checks to see how the center's recommendations were implemented and how they are working.

Products: *Publications*—Annual report, advertising flyers, and news articles. *Awards and Recognition*—Coverage in Congressman Ike Skelton's Small Business Report and in Missouri's SBDC Newsline.

Future Plans: Concentrate efforts on: (1) encouraging small businesses in Missouri to participate in international trade by informing them of the rules and regulations and showing them how they can compete and take advantage of international trade opportunities for small businesses, (2) continuing to emphasize rural economic development, (3) helping to develop and assist new entrepreneurs.

Advice: Technical know-how, knowledge and training, as well as a better knowledge of business methods, produces a highly beneficial "one-stop consulting service" package to clients.

Contact: Dr. Richard Foster, Director, 816/429-4402

Small Business Development Center
Missouri Southern State College

Description: *Goals*—To assist owners and operators of businesses with ongoing counseling, consulting, and continuing education. *Activities*—Operates the Management Development Institute for continuing education and consultation, Small Business Institute, and Center for Entrepreneurship. Combines federal, state, college and private resources to aid the business community. *Audience*—Private business community, especially small businesses. *Innovations*—The Center for Entrepreneurship offers academic courses designed to prepare persons for starting businesses. The Management Development Institute makes available assistance to the business community to fill specific training needs, both on site and on the campus.

Structure: *Staffing*—Director, SBDC, director, Management Development Institute; director, Small Business Institute; director, Center for Entrepreneurship. *Funding*—Federal and college sources for SBDC. Management Development Center generates some income which is used for operating expenses. *Program Evaluation*—Missouri State officials and local college administration responsible for evaluation.

Products: *Publication —Southern Business and Economic Review.*

Future Plans: Continue developing SBDC as an umbrella agency for management development, small business, and entrepreneurship efforts.

Contact: James Krudwig, Director, 417/625-9313

Montana

Small Business Development Center
Northern Montana College

Description: *Goals*—To develop activities that would involve the use of college students and professors assisting North Central Montana business owners in developing of their respective enterprises. To provide firsthand experiences for college students working through business problems (business plans, marketing problems, etc.). *Activities*—The Small Business Development Center will begin in the fall of 1987 with development of questionnaires sent to all small businesses in North Central Montana. The questionnaire was an attempt to find out the needs in the local business community. Now seeking extramural funding for the development of center projects. Developing and coordinating with cooperative education and continuing education in an effort to provide business contacts and follow-up educational development activities. Working on development of a technology transfer center (incubator facility that would affiliate a joint venture between the college and tool and die maker entrepreneurs interested in federal procurement throughout the State of Montana). *Audience*—The small business community of Montana and college students enrolled in the business technology program.

Structure: *Staffing*—Director. *Funding*—General fund allocation. Now seeking extramural funding. *Program Evaluation*—Not yet developed.

Contact: Kevin Carlson, Assistant Professor of Business, 406/265-3221

Nebraska

Public Administration and Center for Applied Urban Research
University of Nebraska at Omaha

Description: *Goals*—To assist in development of improved statewide community economic development efforts. *Activities*—Carries out research related to community/economic development. Offers training directed toward improving economic development efforts. Develops documentation for such efforts. *Audience*--Community leaders in economic development (elected, appointed, private sector), state government officials. *Innovations*—The delivery system matches policy and applied research with direct technical assistance. Current focus is on application of strategic planning process techniques to local development efforts.

Structure: *Staffing*—University personnel working part-time for the center include department chair, department faculty, director and associate director of research center and technical support staff. *Funding*—University budget, state grant and some in-kind support from the university. *Program Evaluation*—Number and quality of activities undertaken, and through perceptual data provided by assistance consumers.

Products: *Publications*—"Local Economic Development Strategic Planning." Software being developed on how to carry out an environmental scan.

Future Plans: Continue existing projects. Expand applied research in small town economic development. Expand documentation and training programs directed toward community economic development.

Advice: Develop systematic action plan. Work closely with other university participants, state government, and community organizations to develop programs. Solicit support from as many sources as possible to carry out activities.

Contact: B. J. Reed, Chair, Department of Public Administration, 402/554-2676

New Hampshire

Small Business Development Center
Keene State College

Description: *Goals*—To provide counsel and advice to small business entrepreneurs and would-be entrepreneurs. To provide seminars and workshops in functional areas of small business management. To provide information and referral services for small business entrepreneurs. *Activities*--Counsels 297 small business clients in the Cheshire County/Sullivan County region of New Hampshire. Conducts courses in "Starting a Small Business" cosponsored either by the Continuing Education Division of Keene State College or by the NH Vocational Technical College. *Audience*—Small business entrepreneurs.

Structure: *Staffing*—Executive director, secretary, associate counselor, on-call specialists. *Advisory Board*—Six members. *Funding*—U.S. Small Business Administration, State of New Hampshire, University System of New Hampshire, and private-sector sources. The program does not generate income. *Program Evaluation*—Number of clients counseled short term, number of clients counseled long-term, number of attendees at courses, seminars, and workshops, number of clients served by information and referrals supplied.

Future Plans: Increase the number of long-term clients served and offer more seminars, courses, and workshops.

Advice: Talk with existing small business development centers to get ideas and guidance.

Contact: David Richardson, Regional Manager, 603/536-5000 x2523

Small Business Development Center
Plymouth State College

Description: *Goals*—To assist in the economic development of New Hampshire through individual counseling and consulting and group seminars. *Activities*—Offers a series of workshops with local chambers of commerce to assist local small businesses in major business areas. Starting a small business incubator in Laconia, NH, to provide assistance in the formative years of businesses in the state's Lakes Region. Counsels businesses and assists in leveraging funds from area banks and investors. *Audience*—Small businesses throughout New Hampshire, which contribute 98 percent of all business in the state. *Innovations*—The method of delivery is consistent with SBDCs throughout the country. The center provides outreach to the community and takes services to the client.

Structure: *Staffing*—Regional manager, secretary. *Advisory Board*--Being developed. *Funding*—Grant from the U.S. Small Business Administration, Plymouth State College. The program generates some income, which is used to further meet the goals of the office. *Program Evaluation*—The SBA and the state SBDC headquarters evaluate the program by surveying clients, banks, and constituent groups. Qualitative and quantitative measures are used, such as the number of clients served, dollars leveraged, increased sales for clients, quality of seminars, client satisfaction, bank references.

Future Plans: Provide this service to more clients throughout the state. Play an active role in the development of the local economy. Assist our clients in international trade by establishing a World Trade Center in NH.

Advice: Visit similar programs in other states. Hire a staff that understands the needs of the local economy. Discuss future commitment to the program with local government officials.

Contact: David M. LaMar, Executive Director, 603/352-1909 x238

New Jersey

New Jersey Small Business Development Center
Rutgers University

Description: *Goals*—To contribute to the overall economic development of New Jersey communities by providing critical services in support of small businesses statewide. *Activities*—Provides free, comprehensive counseling and low-cost educational opportunities to small business owners and potential owners throughout New Jersey. Counseling and programming cover, but are not restricted to, the following general areas: start-up, finance, sales, marketing, advertising, planning, accounting, financial management, technology assessment, international trade, acquisitions, government procurement, and personnel. *Audience*—All small business owners and potential owners in New Jersey. *Innovations*—Veteran's Small Business Expo, Womens' Business Ownership Conference, Innovations/Inventors Conference, Small Business Innovations Research (SBIR), procurement workshop, Air Services Development Office (ASDO).

Structure: *Staffing*—Personnel in Rutgers Graduate School of Management. *Advisory Board*—Twelve members. *Funding*—U.S. Small Business Administration, New Jersey Department of Commerce and Economic Development. New Jersey's SBDCs are each supported by their host educational institution. *Program Evaluation*—All long-term clients are asked to complete evaluation forms to assess the effects of SBDC counseling. In addition, an annual client impact survey is conducted by the staff.

Products: *Publications*—Quarterly newsletter that includes a calendar of training events; *Business Assistance Directory for NJ Minority-Owned Businesses; Business Assistance Directory for New Jersey Veterans;* "Entrepreneurial Program for Indochinese, Series I: Chinese."

Future Plans: Continue high-quality service to the small business sector. Expand satellite structure and program if funding is available.

Advice: Identify an area of need and conduct thorough research. Wherever and whenever possible, top existing resources. All year round, network in your field to stay on top of needs, developments, and opportunities.

Contact: Janet Steele Holloway, Statewide Director, 201/648-5950

New Mexico

Technological Innovation Program
(TIP)
University of New Mexico

Description: *Goals*—To facilitate the transfer of technologies from the Centers of Technical Excellence and the federally funded R&D organizations in New Mexico to commercial markets. To provide business assistance to start-up and small technology-based businesses in New Mexico. To leverage technical, business, and financial resources toward achieving the economic development objectives of the Rio Grande Corridor initiative. *Activities*—Offers services in business opportunity evaluation, technology assessment, market research, marketing strategies, company start-up, formal business plans, financial planning, loan packaging, determining intellectual property rights, negotiations, financial networking, management team development, entrepreneurship training, other resources networking, and interim management. Handles inquiries, performs screening and feasibility studies, assists in new ventures and creates jobs. *Audience*—Institutional R&D organizations such as universities and federal laboratories, individual entrepreneurs, and existing businesses in New Mexico. *Innovations*—The TIP is an integral part of New Mexico's Economic Development Initiative, which is designed to promote the commercial development of New Mexico's substantial R&D/technology base. TIP provides hands-on business assistance and teams with sister organizations, such as the New Mexico Research and Development Institute, which can provide development funds, and the Centers of Technical Excellence, which can provide technology-related assistance.

Structure: *Staffing*—Three senior-level, three junior-level, and three part-time personnel. All staff perform the function of business analyst and hands-on business consultant. Several of the staff have dual business/technical backgrounds. *Advisory Board*—Client review committee to be formed in the near future. *Funding*—State of New Mexico. The program does not typically generate income. There is a method for accepting donations of stock from clients, which are put into an endowment fund for the program. *Program Evaluation*—Number of inquiries handled, screenings and feasibility studies performed, new ventures assisted, capital raised, jobs created, and students trained.

Products: *Publications*—Quarterly and annual reports. Business plans for clients.

Future Plans: Continue to serve New Mexico's Economic Development Initiatives.

Advice: Hire only top-notch staff with practical experience. Have program support from the top. Focus your efforts: don't get caught up trying to be all things to all people.

Contact: Gary S. Smith, Director, 505/277-7110

New York

Economic Development and Technical Assistance Center
State University College at Plattsburgh

Description: *Goals*—To create new, permanent, private-sector jobs. To stimulate capital investment. *Activities*—Provides several business assistance and economic development services, including one-on-one counseling of business owners and managers through the Small Business Development Center program and other nonclient-specific regional economic development programs, such as the Adirondack Products Trade Show, Venture Capital Network of New York (a matching service for entrepreneurs and investors) and INFO NEW YORK, a computerized, county based economic and demographic statistical retrieval system. *Audience*—Economic development professionals in New York's sixteen nothernmost counties, business owners and managers. *Innovations*—Strives to resolve "access" problems—access to capital, to markets, to information, and to counseling resources. This is accomplished in part by utilizing a "circuit rider" approach, with a periodic business counselor presence in more remote parts of the service area.

Structure: *Staffing*—10-12 full-time professional staff with expertise in the following areas: marketing, finance, management, accounting, international trade, law, computers. *Advisory Board*—Fifteen members, largely private sector. *Funding*—Federal government, state government, nonprofit organizations, and private corporations. *Program Evaluation*—Client follow-up through surveys. Criteria: client attribution, job creation, capital investment.

Products: *Publications*—Annual report, brochures available on various component programs.

Future Plans: Develop a limited number of regional projects that address "access" issues.

Advice: Develop a narrow niche to avoid duplication. Form strategic organizational alliances carefully. Hire the best, seasoned staff you can find.

Contact: Stephen P. Hyde, Director, 518/564-2214

Management Assistance Center
State University College of Technology at Utica/Rome

Description: *Goals*—To improve capabilities and increase productivity in Central New York by using resources wisely and without duplication. *Activities*—Operates Small Business Institute, (SBI), Small Business Development Center, SBDC, Advance Management Training Program, (AMP), Industrial Innovation Extension Service (IIES), and Entrepreneurial Education Resource Center, (EERC). The latter reaches into secondary education to start entrepreneurial and economic training at the early stages. *Audience*—All New York State, but concentrated in Central New York. However, the Entrepreneurial Center is the only statewide center and does serve all secondary schools in New York State. *Innovations*—Consolidation under a single source various programs for economic development. This approach has synergistic results and minimum duplication (costs). Further, reaching into secondary schools takes advantage of early economic training. Work directly with local Service Corps of Retired Executives.

Structure: *Staffing*—Full-time professionals and occasionally, graduate students. *Advisory Board*—Statewide advisory board for SBDC, steering committee for IIES, School of Business and Technology Advisory Committee for others. *Funding*—SBDC funded by federal government-state-campus. SBI funded by Small Business Administration. IIES funded by state and campus. EERC funded by state and campus. AMP self-financed, surplus funds used for supporting other programs. *Program Evaluation*—Measured in part by client satisfaction, written evaluation, resolution of problems presented.

Products: *Publications—Guide To Doing Business In [Name of County].* Computers Apple to Zenith, Tax Reform Act of 1986, An Introduction To Computer Systems. *Awards and Recognition*—1985 Central New York Outstanding Small Businesses Advocate.

Future Plans: Continue seminars in business management and technology. Conduct training programs for combined audiences of business/technology management personnel. Hold an annual "trade" show for Central New York firms to acquaint them with existing capabilities. Develop statewide Entrepreneur-For-A-Day Program.

Advice: Staff your program with trained and experienced professionals having capability to provide hands-on training with state-of-the-art equipment. Avoid duplication of activities within the delivering agency and other outside services.

Contact: Al Mario, Director, 315/792-7432

Business and Industry Centers
State University of New York

Description: *Goals* —To assist local and statewide economic development agencies with the collection and dissemination of information pertaining to the recruitment of new industry and the retention of mature industrial organizations. To provide area business and industry with informational and technical assistance. *Activities* —The program coordinates the development of the Chautaqua County Industrial Development Information Center, a county-wide service that will make it possible for small- to medium-sized firms to access a range of training services and programs. It has produced a small business incubator initiative and provides area business and industrial organizations with direct assistance in such areas as computer support, financial planning, accounting practices, training needs assessments, etc. When fully operational, the Center will serve as a base for the target marketing of select industrial sites. *Audience* —Mature industrial organizations of all types and sizes. New business and industrial organizations. Individuals interested in starting new businesses. *Innovations*—All requests for assistance are coordinated from one central point. Each inquiry is handled on an individual basis and coordinated by one individual or a specially assembled team of consultants. This mode of delivery insures maximum continuity between the center and the client and relieves the client of the burden of having to personally contact a number of support agencies.

Structure: *Staffing* —Director, associate director, internal and external consultants are employed as needed. *Advisory Board* —Nine members. *Funding*—Overhead expenses come from the regular office of continuing education operating budget. Additional income is generated and used for program enhancement. *Program Evaluation*—Program is regularly evaluated by clients and by the advisory board. In addition, the center is also evaluated as a regular function of the college.

Products: *Awards and Recognition*—Project featured in Autumn 1984 issue of *Connections,* a publication of the Research Foundation of the State University of New York.

Future Plans: To establish an economic development related data base for use by all area business, industry, and government agencies. To develop a specialized assistance network that will focus directly on the informational needs of rural economic development agencies. To develop a specialized assistance network for mature industry.

Advice: Develop a detailed business plan for the administration and delivery of programs and services. Make sure that institution is willing to provide needed resources.

Contact: John Mather, Director, SUNY Business Services, 518-443-5392

New York State Small Business Development Center
State University of New York

Description: *Goals*—Provide counseling and training to entrepreneurs and help them achieve their goals of ownership, profitability, and success in business. *Activities*—The NYS/SBDC has counseled a substantial number of clients to resolve complex problems. Areas of counseling include business start-up, sources of capital, marketing/sales, financial analysis, international trade, and others. The centers have sponsored over one hundred workshops and conferences in the past two years. *Audience*—All types of entrepreneurs and small businesses.

Structure: *Staffing* —Participating campuses: SUNY Albany, Binghamton, College at Plattsburgh, College of Technology at Utica/Rome. *Advisory Board*—Thirteen or more members. *Funding* —US-SBA; State of New York.

Future Plans: Export assistance program.

Contact: James King, Director, 518-443-5398

North Carolina

Regional Development Institute
East Carolina University

Description: *Goals*—To provide technical assistance and data to local government agencies developing state-mandated plans for land management, transportation, and solid waste disposal. To respond to requests for assistance from businesses, industries and individuals in the private sector. To conduct applied research and publish economic and demographic data. *Activities*—Has conducted over fifty projects in sixteen counties and responded to numerous requests for assistance. Over thirty-eight interns and work-study students and thirty-seven faculty have been engaged in or provided support to these projects. In addition, the Small Business and Technology Development Center has provided service to more than 150 clients. Projects include community development, special services, seven in enviro-economics, media services, and six in information services. *Audience*—Residents in the regional university community defined by EDA in 1964 as thirty-two counties. *Innovations*—RDI staff members broker the services of the ECU faculty and provide intern training and experiential career education for students in decision science, computer science, community design, environmental health, communications, media technology, public administration, and other disciplines.

Structure: *Staffing*—One director, four field associates, one each in community development, environmental management, business assistance, and technical services, one director of media services (half time), three support associates, one each for budget/facilities management, document/manuscript production, and research/grant development. *Funding*—State appropriations in the ECU budget. Income generated by the program is based on direct cost retrieval and used for direct reimbursement of the operating costs of intern wages, travel, materials, and supplies, for producing documents and reports, and for communication costs. *Program Evaluation*—Internal, through direct feedback from clients. Criteria include meeting constraints on time and budget (by staff) and approved acceptance of final products, reports, or publications by clients. Over the long term, external data are gathered on the economic impact of projects on clients or the community.

Products: *Publications*—ASPA newsletter, one per semester. *Awards and Recognition*—Director serves on board of directors of the North Carolina World Trade Association.

Future Plans: Establish a fully equipped center for computerized cartography and graphics. Emphasize research, publications, and selective distribution of data on eastern North Carolina. Participate in the development of a multidisciplinary gerontology center with the ultimate aim of housing and directing the economic statistics unit.

Contact: Janice Faulkner, Director, 919/757-6650

International Agricultural Programs
North Carolina A & T State University

Description: *Goals*—To solve global problems affecting less developed countries through teaching, research, and technology assistance programs. *Activities*—Provides teaching of foreign students, short-term outreach projects in less developed countries. Provides technical assistance in Guinea, Niger, Zaire, in agricultural research and training projects. *Audience*—Students and professional workers from less developed countries. *Innovations*—Faculty members go abroad on long- and short-term technical assistance teams to work on government-sponsored projects.

Structure: *Staffing*--Six persons.

Contact: Dr. Richard D. Robbins, Coordinator, 919/334-7901

Urban Institute
University of North Carolina at Charlotte

Description: *Goals*—To assist existing and start-up small businesses. To provide data and other information on economic development topics. To conduct studies on a contract basis for public-and private-sector entities. *Activities*—Small Business Center houses an incubator that currently has eight companies generally categorized as start-up, high technology. The center also houses the regional office of the state's Small Business and Technology Development Center. The Economic Development Program of the Urban Institute maintains a regional data base and performs studies under contract on economic development topics. Activities include land-use planning, industrial targeting, water and sewer planning, publication of atlases, feasibility studies, and housing studies. *Audience*—Directed primarily to small businesses but has some direction to every entity involved in economic development in this region of North Carolina. *Innovations*—The program is traditional in its mode of operation.

Structure: *Staffing*—Small Business Center: Director of University/Business Incubator Center, Director of Small Business and Technology Development Center. Economic Development Program: Director of Economic Development and Planning, Director of Regional Information System. *Advisory Board*—For the incubator, approximately thirty members. The Metrolina Entrepreneurial Council serves an advisory capacity for the regional office of the Small Business and Technology Center. It has approximately twenty-five members. *Funding*—Private and public money. Program is beginning to generate funds, which are reinvested into the operations of the center. The Small Business and Technology Development Center receives federal and state funding. It generates no income. The

Economic Development program of the Urban Institute is funded primarily through small grants and contracts, with limited support from state funds.

Products: *Publications—Charlotte-Mecklenburg Atlas; Atlas of the South; Atlases of North Carolina's Urban Regions; Metrolina Urban Regions Atlas; North Carolina Economic Profiles.*

Future Plans: Make programs fully operational over the next few years. Develop a productivity center and technology transfer activities. Respond to market demands.

Contact: William J. McCoy, Director, 704/547-2307

Economic Development Division, Center for Improving Mountain Living

Western Carolina University

Description: *Goals*—To increase job opportunities and capital investment in the western twenty-eight counties of North Carolina. To assist existing businesses to reduce business failure. To aid in community development. To spur the accumulation of local investment capital to enhance business development. To assist in the development of beneficial policies for business and industry in the region. *Activities*--Has been active in a wide variety of business/industrial development projects as well as community development type projects. During 1986 the division assisted twenty-one private businesses. In addition, the division staffed a ten-county certified development company and assisted in the management of two small business incubator facilities. Other division activities include the provision of demographic data mainly through the County Development Information profiles, published annually for each WNC county. The division has worked closely over the past few years with two agricultural cooperatives/associations in the region. The division provides technical assistance to local government on request. *Audience*—Business, industry, community organizations, municipal and county governments, state and federal agencies, and private citizens involved in economic development in the western twenty-eight North Carolina counties. *Innovations*—Besides providing desperately needed services in a predominantly rural area where such assistance and services are not readily available, the division keeps abreast of innovative economic development concepts. This includes the small business incubator concept in which the division has been extensively involved. In fact, the division played the key role in establishing two such facilities in the region.

Structure: *Staffing*—Director, community development specialist, two social research associates. *Funding*—U.S. Economic Development Administration and the state university system. *Program Evaluation*—Number of jobs created or saved, capital investment as a result of the division's assistance.

Products: *Publications—County Development Information Profiles; Demographic Atlas of Western North Carolina. Awards and Recognition*—First Place, 1984, NAMTAC Project of the Year Award; Second Place, 1984, NAMTAC Project of the Year Award.

Future Plans: Perform a joint project with the WCU Biology Department to develop an aquaculture center for conducting trout research with the goal of assisting and stimulating the trout industry in the region. Conduct a regional development strategy study of western North Carolina. Begin publishing a quarterly economic newsletter.

Advice: Survey current economic development efforts in your service area to avoid duplication of existing services. Research successful efforts in innovative economic development across the nation, and adapt those which appear workable and applicable to your area. Strive to make your services easily accessible to the business community—for example, by conducting seminars or other programs at the chamber of commerce when possible.

Contact: Thomas McClure, Associate Director, 704/227-7492

Small Business and Technology Development Center

Western Carolina University

Description: *Goals*—To create job stability in the business community by assisting existing and prospective small business clients. *Activities*—Provides small business counseling on a regular basis, in twelve communities across western North Carolina, to existing or prospective businesses. Conducts various workshops, such as government procurement workshops. Has also been active with a school-based enterprises project designed to promote small business ownership and entrepreneurship at the high school level. *Audience*—Existing and prospective small business owners in the western twenty-eight counties of North Carolina. *Innovations*—Offering small businesses counseling on a regularly scheduled basis in twelve strategic locations in the region exemplifies the innovative nature of this program. By offering its services in these locations, the center serves all people in the region at locations within a 45-minute drive.

Structure: *Staffing*—Director, assistant director, social research associate, two graduate students. *Advisory Board*—Nine members. *Funding*—SBA, through the university system, and the state legislature. *Program Evaluation*—Periodic evaluations of centers are conducted by the National Association of Small Business Centers in conjunction with SBA.

Products: *Awards and Recognition*—1985 SBTDC Executive Director Award of Excellence.

Future Plans: Develop a more visible presence in Asheville (the major SMSA in the region). Open a satellite office in Boone, near the northeastern corner of the service area.

Advice: Survey current economic development efforts in your service area to avoid duplication of existing services. Research successful efforts in innovative economic development across the nation, and adapt those which appear workable and applicable to your area. Strive to make your services easily accessible to the business community—for example, by conducting seminars or other programs at the chamber of commerce when possible.

Contact: Thomas McClure, Director,704/227-7492

Ohio

Ohio Rural Universities Program
Bowling Green State University

Description: *Goals*—To provide assistance to rural local government. *Activities*—Focuses on local and regional economic development assistance. Provides technical assistance to a number of local and county governments to improve their economic development and business assistance activities. *Audience*—Rural local government.

Structure: *Staffing*—Faculty and graduate students. *Funding*—Ohio legislature.

Contact: Dr. Frank McKenna, Director, Public Administration, 419/372-7273

Innovation Center and Research Park
Ohio University

Description: *Goals*—To encourage economic growth through research, product development, and commercialization. *Activities*—Development of genetically engineered livestock. Customized transgenic laboratory animal models (mice). Development of viral susceptibility testing systems. Hand-made musical instruments (door harps, harps, psalteries). Custom-designed interactive video applicable to training and marketing. Tofu food products. *Audience*—Entrepreneurs, college professors and alumni, general public. *Innovations*—Program offers low overhead to occupants through rent that includes utilities and janitorial service, access to university expertise and equipment, use of clerical pool, and telephone answering services.

Structure: *Staffing*—Director, associate director, director of business affairs; two typists. *Advisory Board*—Eight members. *Funding*—Primarily state appropriation, income generated through rent and clerical services provided. Income earned to date has been accrued for future use. *Program Evaluation*—Success achieved when tenants produce and market their products or technology, graduate from the "incubator," and become self-sufficient entities (preferably on research park property).

Products: *Publications—Public/Private Partnerships: Small Business Incubator Development.*

Future Plans: Continue operation of "incubator," and develop research park facilities.

Advice: Acquire the necessary business expertise (all phases). Keep overhead low. Location should be attractive geographically, i.e., transportation, industries, etc.

Contact: Dinah Adkins, Associate Director, 614/ 593-1791

Center for Urban and Public Affairs
Wright State University

Description: *Goals*—To provide an outreach program of research and professional service for the metropolitan area. To nurture the undergraduate program in urban affairs. To develop a graduate program in urban and public affairs. *Activities*—Currently producing an *Atlas for the Dayton-Miami Valley Metropolitan Area,* to be used by the various chambers of commerce to provide information necessary to attract new industry. Economic development assessments and preliminary plans have been produced for two smaller, local communities. An economic impact assessment is being conducted for Dayton concerning the locating of industries over the aquifer. An economic impact study is being conducted for the regional transit authority to determine what retail markets are affected by those who use the transit system, and how much. CUPA provided all data for Dayton's proposal to attract the National Center for Manufacturing Sciences. CUPA is involved in a number of studies on the quality of life in the urban setting but not strictly economic development. CUPA produced a *Guidebook to Neighborhood Market Analysis* for use by local neighborhood priority boards, conducted housing and retail market analyses for neighborhoods, cosponsored a training program for neighborhood leaders, conducted a neighborhood conflict mediation program and a neighborhood grant writing workshop. *Audience*—The audience varies with the specific activity involved but is generally restricted to the primary service area of the university. *Innovations*--Provides a steady research and service base necessary for the proper nurturing of undergraduate and graduate programs while at the same time providing rapid response to the needs expressed in the metropolitan area. This response is intended to provide rapid turn-around, sometimes in less than 2-3 weeks. This has been possible through the creative use of student assignments and flexible funding.

Structure: *Staffing*—Three faculty members, one of whom is the director, and a full-time secretary. Student employees, primarily majoring in urban affairs, complement the staff. *Advisory Board*—Sixteen members chosen from the various constituencies served by CUPA, many from government agencies and groups concerned with economic development. *Funding*—The center budget is approximately $225,000, some 52 percent provided from the Ohio Board of Regents University Research Funds, some 28 percent from the university, and the remaining 20 percent garnered from small grants and contracts from the constituencies served. CUPA exceeded its first-year goal with small grants and contracts. *Program Evaluation*—Quality of the educational program, extramural funding garnered, and degree of satisfaction expressed by those served by CUPA.

Products: *Publications*—Various, available from the director. *Awards and Recognition*—During the first year of operation, CUPA was awarded some $110,000 from the Ohio Board of Regents Urban University Research Funds and garnered some $65,000 in extramural grants and contracts. The MEAD Corporation granted CUPA some $15,000 in scholarships, these funds being part of the Dively Award to MEAD based on the nomination submitted by CUPA.

Future Plans: Within the year, CUPA should be granted the authority to grant a M.S. degree in Urban and Public Affairs. This will expand the base on which CUPA operates and allow this center to address, on a limited basis, problems of a more statewide nature.

Advice: Multidisciplinary centers: (1) need to be nurtured from the university perspective rather than a single discipline or college, (2) should be created under a policy that allows small grants and contracts within the local domain to operate under different overhead guidelines as compared with grants and contracts from national agencies, and (3) must be protected from excess pressures from the external domain of the university when the demand becomes too high.

Contact: Dr. Mary Ellen Mazey, Director, 513/ 873-2941

Cushwa Center for Industrial Development
Youngstown State University

Description: *Goals*—To help industry identify markets for products and services. To provide enterprise counseling, manufacturing, consulting. To assist in strategic business planning. *Audience*—Businesses in Mahoning, Trumbull, and Columbiana counties in northeastern Ohio as well as Mercer and Lawrence Counties in western Pennsylvania.

Structure: *Staffing*—Director and two professional staff. *Advisory Board*—Six members. *Funding*—Endowment, with proceeds used for operational purposes supplemented by funding from external foundations. *Program Evaluation*—Number of firms established.

Contact: Lawrence G. Looby, 216/742-3119

Oklahoma

Economic Development Activities
University Center at Tulsa

Description: *Goals*—To help Tulsa with economic development efforts through provision of skilled manpower, various enterprise-related service programs, and thorough research. *Activities*—Works with the Metro Tulsa Chamber of Commerce to attract new industry to the area. Developing a management institute in Oklahoma to make high-level technical and managerial education available at low (or lower) cost to state businesses and industry. *Audience*—Future business and industry, state and local townspeople.

Contact: A. C. MacKinney, President, 918/585-8228

Oregon

Regional Services Institute
Eastern Oregon State College

Description: *Goals*—To promote community and economic development activities in the ten eastern-most counties of Oregon by responding to locally defined needs for assistance. To assist and otherwise work with other community and economic development programs on a statewide basis to promote cooperative development efforts. *Activities*—Offers programs that support and foster community and business development, including: (a) Small Business Development Center; (b) Oregon Marketplace, Blue Mountain Program; (c) University Center Rural Oregon Diversification Program; (d) Oregon Mine Safety and Health Training State Grant Program; (e) Blue Mountain Intergovernmental Council Economic Development District; and (f) Eastern Oregon Regional Arts Program. Institute program clients receive a variety of services including technical assistance, business counseling, assistance in locating funding to support programs, projects and business development activities, access to on-line data-base information, business resources and referral information, support in finding goods and services offered by local, regional, and statewide suppliers (import substitution), foreign trade information, technology transfer support, community and economic development planning assistance, and noncredit seminars, workshops, and conferences. Safety-related training and educational programs are provided to the mining industry. *Audience*—Local government agencies, businesses, and individuals from throughout the ten-county service region and statewide when assistance is requested by cooperating economic development organizations. *Innovations*—The institute both operates and supports community and economic development programs. The cooperative organization of activities within the college, the institute, and with other institutions and organizations ensures that the maximum resources are used in responding to opportunities and problems without duplicating program and staff efforts.

Structure: *Staffing*—President, Regional Services Institute Director, Economic Development District Planner, Regional Arts Council Director, University Center Director, Community Development Specialist, Marketplace Broker, Small Business Development Center Director, Mine Safety and Health Training Director, one administrative assistant, three clerical, and one student secretary. *Advisory Board*—Each program has an advisory committee. More than sixty citizens and faculty members are involved in providing advice and counsel. *Funding*—The Regional Services Institute's base funding is provided by Eastern Oregon State College. Additional money is provided by grants, performance contracts, local government payments, and program membership dues. The income generated by program activities is used to support service delivery efforts. *Program*

Evaluation—Clients are asked to evaluate the quality and value of services provided. Each program activity has different measures of success—an overall measure is the dollar value of resources brought to bear on locally defined problems as a ratio of college dollars invested in RSI, e.g., number of import substitution deals made and dollars saved, infrastructure projects funded and dollar amounts involved (from all sources), loans packaged and jobs created, number and length of artists-in-the-schools involvement in regional elementary and secondary schools, workshop and conference attendance, number served and types of services provided small business clients, etc.

Products: *Publications—Wallowa Lake Basin Economic Development Plan, Industry Selection Analysis, An Implementations Plan for Development of the La Grande Municipal Airport/Light Industrial Park, Buyer's Guide, Northeastern Oregon Forest Products Manufacturers. Awards and Recognition*—As a result of client nomination, the RSI director received Oregon Chapter of the American Society for Public Administration 1986 Award for Career Excellence.

Future Plans: Increase the availability of technical and technology transfer assistance in rural Oregon through implementation of University Center project and involvement in NASA Industrial Applications Center Affiliate Program.

Advice: Ensure that public-service program efforts are incorporated in the institution's mission, that senior administrators are involved in the delivery of public services, and that the program has "flexible" dollars from the institution so that there is an ability to respond to clients with limited resources—evidence of institutional commitment. Develop a mechanism by which faculty members are given recognition and are otherwise rewarded for involvement in public-service program activities.

Contact: Terry Edvalson, Director, 503/963-1755

Oregon Technology Incubator
Oregon Institute of Technology

Description: *Goals*—To provide a comfortable environment for small high-technology start-ups to weather the early years. *Activities*—Provision of joint secretarial, telephone, copying, conferencing, custodial, and business advisory services, significant consulting resources, the technical library, the experiences faculty consultants, the Small Business Development Center, and student part-time workers of Oregon Institute of Technology. *Audience*—Small business start-ups in advanced technology fields.

Structure: *Staffing*—To be established. *Advisory Board*—A seven-member council is determining the feasibility of the development of the incubator.

Contact: Dr. Larry Blake, President, 503/882-2111

Small Business Development Center (SBCD)
Oregon Institute of Technology

Description: *Goals*—To provide all types of small business advisory and referral service to new and existing businesses in the area. *Activities*—During 1986, the center provided 129 businesses with short-term counseling, twenty-five businesses with long-term counseling, and conducted fifteen workshops for 340 people. Typical activities are the development of business plans, marketing plans, personnel policies, accounting systems, computerization, etc. *Audience*—New and existing small businesses in the Klamath Basin. *Innovations*—Staff travel 100 miles within the county to small communities and tourist areas to provide on-site assistance. Most local banks refer many of their potential loan applicants to the center for aid in developing a business plan prior to loan application.

Structure: *Staffing*—Director, business consultant, secretary. *Advisory Board*—Seven members. *Funding*—Federal, state, and college sources, used for staff salaries and the employment of consultants. *Program Evaluation*—The program is evaluated along with eighteen others in the State of Oregon, throughout the Oregon network, for SBDC.

Contact: Keith Kramer, Director, 503/883-7556

Pennsylvania

Mon Valley Renaissance
California University of Pennsylvania

Description: *Goals*—To work at the grass-roots level to develop entrepreneurship. To assist already-established businesses in stabilizing and expanding. To help local businesses and industries become involved in the government procurement process. To make local businesses aware of the potential of Customized Job Training (DJT) programs, the Job Training Partnership Act (JTPA), etc. *Activites*—Through Government Agency Coordination Office, has helped local businesses obtain over $8 million in government contracts, thereby creating or retaining jobs. Over 160 clients are entered into a computer-assisted marketing system that advises them of various government contracts. The Entrepreneurial Assistance Center (EAC) assists entrepreneurs by reviewing proposed business ventures, reviewing capital needs, and identifying basic business procedures to be implemented. Services provided by the EAC include help in preparing bank and SBA loan applications, establishing bookkeeping systems, developing business plans, and making referrals to special resources. *Audience*—Businesses and individuals in a five-county area of southwestern Pennsylvania. The Mon Valley Renaissance has an Entrepreneurial Assistance Center directed to those individuals thinking of starting a business as well as emerging or established businesses that are experiencing problems or are considering expansion. The Government Agency Coordination Office is directed toward established or emerging businesses capable of becoming involved in the government procurement process. The Customized Job Training program is directed toward established businesses that have recently made or are planning to make sizable capital investments and need training to upgrade workers' skills on new equipment or processes. The Technology Training Institute (TTI) is directed toward established businesses with inhouse training needs and toward individuals who have basic skills that need to be upgraded in order to maintain job competitiveness. The Valley Image Improvement Program (VIIP) is a public relations campaign directed to people in and out of the Mon Valley region. The goal of the program is twofold: to portray a positive image of the Mon Valley to those outside the area and to increase positive attitudes within the Valley itself. *Innovations*—The Government Agency Coordination Office (GACO) initiated a Government Bid Board Room, which houses requests for bids from nine government buying agencies. This operation is the first civilian bid board in the nation and the first to house more than one buying command. The room houses bids that were available only in Philadelphia, PA, Warren, MI, Washington, D.C., and other locations that necessitated long trips by local business owners. All bids as well as specifications are available at the GACO's "one-stop shop."

Structure: *Staff*—Fourteen positions. *Advisory Board*—Nine-member Mon Valley Renaissance Advisory Board composed of various executives from banking, large and small businesses, and the corporate community. *Funding*—Public and private contributions. For the past several years, the Pennsylvania state legislature appropriated funds directly for the program. As part of its public-service program, California University provides in-kind contributions and grants from foundations and various state and federal programs. The MVR does not generate income. All services are provided free of charge. *Program Evaluation*—The advisory board provides evaluation on an administrative level. Many of the projects that are grant funded have evaluative procedures built into their programs. Careful records are maintained by the remaining projects, and evaluation occurs periodically, based on numbers of clients served, jobs generated or retained, and other appropriate criteria.

Products: *Publications*—Monthly UPDATE is produced and distributed to approximately 200 supporters, corporate leaders, educators, legislatures, and funding sources to keep them informed about the MVR and its activities. Each program has its own brochure, and the MVR has a video that highlights services that are of interest to local businesses. *Awards and Recognition*—Program featured in requested speeches at numerous colleges and universities throughout the United States, in explanations of the MVR and California University's commitment to public service and how its success has been achieved and maintained. MVR director was presented with an award from Corning for the work he completed with them on Customized Job Training.

Future Plans: Because of the success of current programs, the Mon Valley Renaissance does not plan to add additional programs to its operation but intends to focus even more time, energy, and money on improving current activities.

Advice: Garner the full support of the president, council of trustees, etc. A successful program must also involve community leaders and local economic developers.

Contact: Richard W. Webb, Executive Director, 412/938-5884

Institute for Research and Community Services

Edinboro University of Pennsylvania

Description: *Goals*—To serve as a link between the university and the community, drawing from the resources of the university in order to assist with and meet the needs of the region. To coordinate a range of resources and services aimed at improving the quality of life within the region. *Activities*—Community services include computer program design and nursing center services for senior citizens centers; speech/language tutorial services to schools, workshops and seminars for educators and parents; establishment of a Purple Martin Consortium Center; developing a strategy for growth in northwestern PA; single parent and homemaker training; consultative services in the areas of mental health, nutrition, exceptional citizens, unemployed adults, and community library improvements. Research activities include an economic impact study of the tool and die industry, development of an avionics testing program, development of strategic financial planning for municipal governments, study of retiree-focused business potential, computerized pipe-fitting, studies of acid rain, Lake Erie shoreline erosion, medical ethics, and immunology. *Audience*—Businesses, industries, agencies, organizations, and individuals in the surrounding community.

Structure: *Staffing*—Twelve: Dean; Director, Continuing Education and Special Projects; Coordinator of Grants/Contracts; Director, Honors and Related Programs; administrative assistant to the dean; three secretaries; four graduate assistants. *Advisory Board*—Twenty-four members. *Funding*—University funds and generated funds, the latter used to fund pro-bono projects and activities. *Program Evaluation*—By the number and quality of programs/projects completed each year. Written evaluation of involved businesses, industries, agencies, organizations, and individuals.

Products: *Publications*—"Retiree-Focused Business Potential in Erie." Newsletters.

Future Plans: Establish various and specific service and research centers within the institute, focusing on economic development, quality of life, education, and government.

Advice: Thoroughly research your community needs, not presuming to "tell" the community what it needs. Assess the skills and talents of your university faculty/staff. Match the two.

Contact: Dr. Joseph J. Comi, Dean, 814/732-2671

Rural Services Institute

Mansfield University of Pennsylvania

Description: *Goals*—To assist in the economic development of the rural communities in the region and across Pennsylvania. To collect and share information relevant to that development. To help students gain practical work experience in these activities. *Activities*—Provides small business technical assistance in marketing research and feasibility studies, business plan development, training of staff, linkage to other economic development resources, loan application assistance, fiscal and operations planning, and procedural assistance. Provides community economic planning and development assistance in community needs and consumer activity research, facility surveys, infrastructure analysis. Provides entrepreneurship development and training in workshops, seminars, conferences. *Audience*—Entrepreneurs, business and community planning organizations in the rural region. In policy issues the institute can address a larger, statewide arena. *Innovations*—Provides linkage between business community, community service agencies and governments, and university resources. Currently completing a five-county rural incubator feasibility study. Offering a unique intensive entrepreneurship training program.

Structure: *Staffing*—Coordinator of the Rural Services Institute, a professor from the business department, student assistants, univeristy faculty and part-time staff people. *Advisory Board*—Twelve members. *Funding*—Currently using Ben Franklin Partnership support and seeking additional funding. Mansfield University provides basic support. Some services are offered on a cost-reimbursement basis. *Program Evaluation*—Each activity is individually evaluated for client satisfaction and success. The advisory board reviews the overall scope of the services provided.

Future Plans: Develop a local funding base for these activities. Expand training offerings tailored to local needs. Provide more direct assistance.

Contact: Dr. J. Dennis Murray, Coordinator, 717/ 662-4808

Ben Franklin Partnership Program
Pennsylvania State University at Harrisburg

Description: *Goals*—The Ben Franklin Partnership Program, Advanced Technology Center of Central and Northern Pennsylvania, South Central Satellite (ATC/SCS), is an economic development program designed to stimulate business growth and employment in Pennsylvania. Major program goals are to create and maintain jobs in Pennsylvania, improve productivity in existing firms, and diversify the state's economy and promote the use of advanced technology. *Activities*—The partnership is administered by the Department of Commerce through four Advanced Technology Centers (ATC) established at research universitites across the state. Penn State Harrisburg is the headquarters for the South Central Satellite of the Unversity's ATC. The ATCs bring together representatives of business, industry, government, and education in a consortium effort to solve production problems, create new products or businesses, conduct research, increase sales, or use advanced technology to revitalize traditional industries. Four research and development areas are now receiving highest priority: biotechnology; food and plant production and processing; coal and mineral production, processing and utilization; and manufacturing management and control systems.

Contact: ATC/SCS Office, 717-968-6339

Center For the Quality of Working Life
Pennsylvania State University at Harrisburg

Description: *Goals*—The Center for Quality of Working Life was established at the campus in 1978 under grants from the National Centerfor Productivity and Quality of Working Life and the Pennsylvania State University. The center was established for three purposes: (1) To stimulate improved organizational effectiveness and quality of working life in Pennsylvania; (2) To act as a catalyst and focal point for the solution of productivity and quality of working life problems; (3) To assist in improving the general business climate of Pennsylvania.

Contact: Center for Quality of Working Life, 717/ 948-6292

Small Business Development Center
Pennsylvania State University at Harrisburg

Description: *Goals*—Small business development in southeastern Pennsylvania. *Activities*—The Small Business Development Center, located on campus, serves 7 South Central Pennsylvania counties. The center offers a variety of services, including counseling, workshops, and seminars for the small business community. The SBDC, in conjunction with the academic divisions, offers students numerous opportunities for field experiences.

Contact: Small Business Development Center 717-948-6069

Institute for Public Service
Shippensburg University of Pennsylvania

Description: *Goals*—To assess the various needs of the people and communities in South Central Pennsylvania. To comprehensively explore and develop programs to use university resources in meeting these needs. *Activities*—The institute is an umbrella organization that includes six centers: Center for Education and Human Services, Center for Local and State Government, Energy Center, Center for Arts and Humanities, Center for Juvenile Justice, Frehn Center for Management. *Audience*—Communities in South Central Pennsylvania, specifically, and the state in general. *Innovations*—Using all the faculty, fiscal, and physical resources of the university, as well as other resources, the institute is becoming the first source of assistance in a wide range of programs, projects, and services.

Structure: *Staffing*—Staffing patterns vary among the six centers and consist of persons serving part time, full-time, and as consultants. *Advisory Board*—A five-member advisory board is being established. *Funding*—University support, grants, contracts, and fees. Fees are established by taking into account the clients' ability to pay and the recovery of costs. The institute subsidizes projects as needed. Program-generated income is used to pay for additional public-service activities. *Program Evaluation*—Descriptive data are used to evaluate programs in the short term. However, in the long term, programs are being assessed by their public acceptance and quality of service as measured by the enhancement of the business environment, the arts, educational experience, and community life.

Products: *Publications*—Examples: "Business Management Working Paper Series" newsletters, "Government Center News," "Energy Leaks," "Financial Trend Monitoring," "Waste Management Practice," "Recycling Feasibility Studies," "Home Cooling Fact Sheet." *Awards and Recognition*—Example: Certificate of Appreciation from the Pennsylvania Department of Community Affairs.

Future Plans: Develop and expand public-service outreach, and relate this expansion to enhanced educational experiences for university students and staff members.

Contact: Dr. Thomas E. Enderlein, Executive Director, 717/532-1251

Center for Economic and Community Development
Slippery Rock University of Pennsylvania

Description: *Goals*—To coordinate the university's resources with those of local and regional agencies in an effort to foster economic and community development. *Activities*—Analyzes community and industry needs, assesses university strengths and weaknesses, determines targets of opportunity in which university involvement makes sense, defines appropriate new roles for the university, develops the roles, implements the role and follow through, evaluates effectiveness. *Audience* —Butler, Mercer, Lawrence counties.

Structure: *Staffing*—Director, business analyst. *Advisory Board*—Currently under consideration. *Funding*—Slippery Rock University, Ben Franklin Partnership Grant for Entrepreneurial Development. Currently not generating income while in start-up phase.

Future Plans: Develop a dynamic organization that changes as the economic development needs of the audience change.

Contact: Marthann Suffy Rettig, Director, 412/794-7116

South Carolina

Small Business Development Center
Winthrop College

Description: *Goals*—To keep small businesses flourishing and successful through careful planning and the maximizing of company resources. *Activities*—The center provides one-on-one counseling for small business owners or potential small business owners on various subjects including, prebusiness planning, marketing, advertising and accounting/bookkeeping. The center also provides management training workshops for the small business community. Procurement assistance (specialized selling to local, state, and federal governments) is also provided. *Audience*—All small business owners or potential owners in a fifteen-county geographical area of South Carolina. *Innovations*—A business library stocked with many how-to books, manuals, and brochures is provided for the use of small businesspersons. The program is high service, low cost. MBA students are also used as consultants, and the MBA faculty provides assistance in more advanced and technical business situations.

Structure: *Staffing*—Director, secretary/office manager, two senior consultants (senior MBA students), four graduate consultants, five community consultants (retired businesspeople who provide specialized assistance), school of business administration faculty. *Advisory Board*—Fourteen members. *Funding*—State and federal funds. Program generates income through workshop series. The income generated pays for advertising, speakers, refreshments. *Program Evaluation*—Client feedback through survey instruments and personal interviews. Success measured by (1) the number of clients who are successful in opening their business after receiving assistance from the center, (2) the number of clients that remain in business after one year, three years, five years, (3) the number of clients with little aptitude for business that the center is able to persuade not to start a business, and (4) goals set by the SBA.

Products: *Publications*—"Who, What, Where—A Fact Sheet for New and Existing Business in the Rock Hill Area;" "Opening and Operating an Business in Rock Hill, South Carolina;" "Explore the Possibilities of U.S. Government Procurement."

Future Plans: Computerize operations to increase client load from 300 to 400 cases per year.

Advice: Since the program generates little income and depends on outside support, develop a streamlined program that uses existing resources such as graduate students, faculty, volunteers in the community. Become allies with other agencies such as the local chamber of commerce, economic development boards, and city hall.

Contact: Larry D. Durham, Director, 803/323-2283

South Dakota

Economic Development Programs
Black Hills State College

Description: *Goals*—To provide technical development, management development, applied research—i.e., public service. *Activities*—Business plans for small business economic impact study. *Audience*—Regional businesses/entrepreneurs, economic development committees in the region. *Innovations*—Coordinated by governor's office of economic development. Each campus has a representative on an advisory panel that meets regularly to discuss proposals.

Structure: *Staffing*—Five full-time positions funded by Governor's office as a result of a one-year, 1-cent sales tax increase to build a fund for economic development. *Advisory Board*—Eight members, coordinated by governor's office. *Funding*—1-cent sales tax. *Program Evaluation*—Private/public cooperation in projects creation of JOBS. Legislature will evaluate.

Future Plans: Expand grants after initial $500,000 effort. Place more emphasis on basic research, longer-term projects.

Advice: Build support on campus among the faculty.

Contact: Dr. Richard Buckles, Chair, Division of Business, 605/642-6337

Center for Innovation and Technology Enterprise
South Dakota School of Mines and Technology

Description: *Goals*—To provide technical assistance to aid existing businesses in expansion and to assist in the incubation of new businesses. *Activities*—Under development. *Audience*—Business leaders, inventors, investors.

Structure: *Staffing*—One. *Funding*—State of South Dakota. Proposals for funds generation are now on the governor's desk.

Future Plans: Pending (on the governor's desk).

Contact: Dr. Srinivasa Iyer, Director, 605/394-2445

Center for Innovation, Technology and Entrepreneurship
South Dakota State University

Description: *Goals*—To establish a Center of Innovation, Technology and Entrepreneurship (CITE) on each public college/university campus to strengthen campus involvement in all phases of economic development. *Activities*—Initial activities would be applied research and service projects. "Applied research projects" are those that can be shown in direct support of jobs related to innovative, enterprise, technological advancement, or process development. "Service projects" are those that provide consultation and supporting services by faculty and staff, with or without the involvement of graduate students, which can be a benefit to an industrial or commercial firm and to nonprofit and public entities. Later activities proposed for South Dakota State University include EROSPACE/Defense Initiative for South Dakota manufacturers, Critical Band pass Filter Production, Native Grasses Marketing, High Quality Mushroom Compost Production, Intermediate Product Identification, Premium Oats Marketing, Dry Edible Beans Processing, White Corn Development, and Resource Data Bases Development. *Audience*—Industrial and commercial firms, nonprofit and public entities and institutions of higher education. *Innovations*—The action to establish CITE centers on each campus provides a focal point for economic development activity on the campuses and serves to mobilize resources from higher education for effective involvement in a partnership with the governor's Office for Economic Development, the community, and local development efforts.

Structure: *Staffing*—Each regental institution designates a campus director for the Center for Innovation, Technology and Entrepreneurship. This individual will be the CITE director, whose role is to direct encouragement and implementation of economic development activities on campus and to coordinate activities with the Governor's Office for Economic Development. In addition, the director integrates all university actions related to economic development. *Advisory Board*—Fourteen member Economic Development Advisory Council, chaired by the CITE director. A systemwide CITE advisory board (made up of CITE directors) provides input to the governor's Office of Economic Development. *Funding*—Governor's Office of Economic Development, through matching grants by industry, and commercial enterprises, and through existing university budget priorities. *Program Evaluation*—By identifying those projects which provide direct support to jobs related to innovative enterprise, technology transfer, and process development, and by identifying the amount of consultation and other supporting services rendered relating to innovative enterprises and needed technology or processes.

Future Plans: Expand the applied research and service project into longer-term, basic research projects. Provide continued financial support to strengthen economic development activities that currently exist at public colleges and universities. Provide financial support to increase the level of campus research funded by competitive grants and contracts. Authorize the reallocation of state funds for the purposes of strengthening the campus position on competitively funded research.

Advice: Although it is necessary to recognize that short-time results in economic development often are needed to encourage and justify legislative expenditure, it is critically important to recognize that true economic development is a long-term commitment. Do *quality* projects that exemplify the critical role that higher education has to play in economic development. Establish long-lasting liaison with the governor's Office of Economic Development, regional planning and development districts, businesses, industries, communities, and higher education institutions.

Contact: Dr. Paul Nordstrom, CITE Director, 605/688-4111

South Dakota Business Services
University of South Dakota

Description: *Goals*—To provide technical assistance to businesses in areas of business management, international trade, and federal procurement. *Audience*—Small busineses or prospective business persons. *Innovations*—Lead institution is the University of South Dakota, while the field delivery system involves the private sector, through the chambers of commerce, economic development organizations, and planning districts.

Structure: *Staffing*—Small Business Development Center—state director, assistant state director, four area directors, director of international trade, director of procurement technical assistance, two secretaries, numerous part-time students, graduate assistants, faculty members, and private paid consultants. *Advisory Board*—Four subcenters have advisory boards. *Funding*—Federal dollars from the SBA and Department of Defense matched with funds from state resources. *Program Evaluation*—Annually surveys clients to obtain their evaluation of program quality. Monitors clients to compute numbers of jobs created.

Future Plans: Complement existing services, including work on a program to develop sources for both seed money and venture capital. Develop pilot program to provide management support to Native Americans on South Dakota's nine reservations.

Advice: Investigate the strengths and weaknesses of existing comparable programs before undertaking a new program.

Contact: Don Greenfield, State Director, 605/677-5272

Tennessee

Bureau of Business and Economic Research
East Tennessee State University

Description: *Activities*—Provides data and analysis on current and projected business conditions in the metropolitan area. Provides publications and special reports on business conditions and development prospects. Offers counseling and consulting services. *Audience*—Business and community leaders. *Innovations*—Develops and disseminates local business indicators.

Structure: *Staffing*—Director, secretary, and graduate assistant. *Funding*—Internal. *Program Evaluation*—Success indicated in continued requests for BBER services and publications.

Products: *Publications*—*Tri-Cities Business Conditions Reports* (quarterly)

Future Plans: Expand data and analytical activities.

Advice: Establish and maintain indicators of local business conditions as a barometer of development.

Contact: F. Steb Hipple, Director, 615/929-5677

Small Business Institute
East Tennessee State University

Description: *Goals*—To provide managerial assistance to the small business sector to strengthen and expand the economic impact of small businesses in the upper eastern Tennessee area. To provide realistic educational experiences in small business operations for upper-division or graduate students. *Activities*—Consulting teams provide managerial assistance to small businesses. Formal written reports are prepared by the consulting teams, and copies of each are submitted to the clients as well as to the Small Business Administration. *Audience*—Any small business firm may request free managerial assistance from the Small Business Institute. Priority is given to those projects which can, through management and technical assistance, contribute to the stability and growth of small businesses in Tennessee. *Innovations*—This program utilizes upper-division and graduate students in counseling small businesses. Counseling and evaluation takes place at the business site.

Structure: *Staffing*—Director. *Funding*—Grant from the Small Business Administration. East Tennessee State University receives $400 for each client. This income is placed into an account for use to further the Small Business Institute. *Program Evaluation*—No formal evaluation.

Products: *Publications*—Articles: "Personnel Practices of the Nation's Small Business Owners/Managers," "Entrepreneurial Business Type and Area Location Decisions: Method and Application." *Awards and Recognition*—Honorable mention for the outstanding case of 1984-85 from the Small Business Administration.

Future Plans: Expand the number of clients and the involvement of students in the Small Business Institute.

Advice: Target a variety of different types of small business, such as wholesaling, retailing, construction, and service. Maintain a list of prospective clients. Select from this list clients that may provide the greatest economic stability in the region and be of the most educational value to the student.

Contact: Dr. Don Wilkinson, Director, 615/929-4257

Tennessee Small Business Development Center, ETSU Subcenter
East Tennessee State University

Description: *Goals*—To use the expertise of the staff, faculty, and talented students to develop and implement programs of management assistance and training. To improve the equity, profit, and growth potential of small businesses and thus develop jobs in the private sector. Specific goals of the center are to: (1) provide learning opportunities, (2) disseminate information, (3) give in-depth counseling, (4) serve as an advocate for small businesses. *Activities*—From February 1984 through June 1987, has counseled 322 small businesses in the upper seven counties of Tennessee. Has sponsored a number of training seminars focusing on various problems of small businesses. *Audience*—Any small business firm or individual may request free assistance from the TSBDC, ETSU Subcenter. Priority is given to those projects which can, through management and technical assistance, contribute to the stability and growth of small businesses in Tennessee. *Innovations*—University faculty, specifically college of business faculty, are involved in the counseling of small business clients. Counseling may take place at either the university or the business site.

Structure: *Staffing*—Director, assistant director, two assistants, one part-time secretary. *Advisory Board*—A fifteen-member statewide board has been established to advise the state director on the operation of all TSBDC services in the state. *Funding*—Grant from Memphis State University. Memphis State University receives SBA funds for distribution to subcenters throughout the state. In addition, the funds received from Memphis State University must be matched one-to-one by East Tennessee State University. Funds generated by the subcenter are returned to the subcenter budget for use in the expansion of services to small businesses. *Program Evaluation*—Each long-term client evaluates the services received from the subcenter. In addition, the state office of the TSBDC establishes milestones for the subcenters.

Future Plans: Expand the work force to better serve the clients in the outlying areas of the region. Investigate possible establishment of an incubator in the Tri-Cities area.

Advice: Garner strong administrative support for activities. Develop a strong, harmonious relationship with as many news media as possible.

Contact: Dr. Don Wilkinson, Director, 615/929-4257

Institute for Public Service and Division of Continuing Education (IPS/CE)

University of Tennessee at Knoxville

Description: *Goals*—To assist Tennessee city, county, and state government officials in planning for and implementing grass-roots efforts that provide economic development to as many counties as possible. To help Tennessee manufacturers remain as competitive as possible and retain as many jobs as possible through improved manufacturing processes and new business opportunities. *Activities*—Is involved in the following types of efforts that contribute directly to economic development: countywide strategic planning facilitation, assistance in securing government contracts, assistance in adopting and adapting new manufacturing processes (such as flexible manufacturing), and delivery of credit and noncredit courses in independent study and video formats. *Audience*—City, county and state government officials; industrial managers; and average citizens requiring continuing education in nontraditional formats. *Innovations*—IPS/CE is composed of about seventy full-time field delivery (or technology transfer) staff members similar in function to county agents. With the audio, video, and printing packaging capabilities also resident in the organization, services can be delivered in almost any medium (face-to-face, printed, audiotape, videotape, "live" workshop, etc.).

Structure: *Staffing*—Approximately 160 persons in seven agencies or departments: (1) Center for Educational Video and Photography, (2) Center for Extended Learning, (3) Center for Government Training, (4) Center for Industrial Services, (5) County Technical Assistance Service, (6) Municipal Technical Advisory Service, and (7) Radio Services. In many ways, staff of each organization become directly or indirectly involved in economic development projects. *Advisory Board*—Advisory groups for several individual IPS/CE agencies or departments. No overall advisory group. *Funding*—IPS/CE receives nearly $4,789,000 in state general fund appropriations. In addition, the local government services receive about $1,400,000 from their portion of state shared revenues. Fees generate another $1,472,000 a year, and current contracts amount to about $610,000. *Program Evaluation*—Because of the multiplicity of efforts, different criteria are used to evaluate each component. Special attention devoted to client feedback.

Products: *Publications*—Numerous, varied.

Future Plans: Continue to work with the new governor and his staff on some of their top priorities (Tennessee's high illiteracy rate and the state's developing "two economy" profile). Work with local government and community leaders to help committed communities educate themselves about their community. (What are its strengths and weaknesses? What can it be? What can it not be? What do they want it to be? What are appropriate goals, objectives, and strategies to achieve their desired community?)

Advice: Develop a partnership with other groups interested in the same work. (There is too much for one organization to accomplish.) Recognize that community-based economic development assistance must be delivered at the local level by resource persons who understand local politics. Accept the fact that higher education's role is largely facilitation (i.e., helping appropriate officials find the information they need, sorting through it, understanding it, and utilizing it to make decisions that are best for their community.)

Contact: Thomas B. Ballard, Executive Director, 615/974-6621

Texas

John Gray Institute
Lamar University

Description: *Goals*—Assist in the diversification and growth of the Texas-Louisiana Gulf Coast economy, and promotion of a cooperative labor-management environment. *Activities*—Programs and projects are designed to generate new entrepreneurial activity, retain existing industry, improve productivity, and attract new economic opportunities. Potential entrepreneurs and existing small businesses receive counseling and training on pragmatic solutions to problems, including business plans, financing alternatives, bookkeeping, advertising etc. Existing businesses can avail themselves of front-line and middle management training programs to improve productivity, product, and work-life quality. Innovative approaches to labor-management relations are developed and implemented. Market and product research is available to identify existing opportunities, focus recruitment efforts, and monitor economic activity. *Audience*—Local, regional, and national businesses, industries, labor organizations, economic development groups, and government agencies. *Innovations*—Combined efforts to support all four sources of economic stability and growth (retaining existing business, expansion of existing firms, attraction of new business, and promotion of entrepreneurial efforts) in an environment drawing upon industrial, educational, and governmental cooperation.

Structure: *Staffing*—Thirteen professional, seven support. Professional positions include president, executive vice president, three more vice presidents, counselors, managers, economic analyst, and an assistant. *Advisory Board*—Currently nine members, will have eighteen. *Funding*—Private, nonprofit but state-operated organization. Majority of funding from donations. Some internal funds generated on a cost-reimbursement bases. Small Business Assistant Program funded, in part, from Job Training Partnership Act funds. *Program Evaluation*—Number of clients served, publications printed, jobs created, businesses established.

Products: *Publications*— Many. *Awards and Recognition* —Numerous commendations from local businesses, local and state government, publications in national media.

Future Plans: Continue program development with emphasis on outreach efforts along the Gulf Coast. Promote innovative labor-management cooperative efforts in gain-sharing and economic development. Assist in developing similar "grassroots" economic development efforts in other areas.

Advice: Bring all new parties with economic development interests into the process. Provide accurate and current assessments of strengths and weaknesses. Concentrate efforts on developing from within as well as on attracting new-to-area firms.

Contact: Dr. Charles Turco,Executive Vice-President, 409/880-2222

Small Business Assistance Center
Lamar University

Description: *Goals*—To provide high-quality consulting serices to the local small business community. To provide seminars and workshops that meet the needs of the small business community. To serve as a small business information center. *Activities*—The SBAC staff stays in constant contact with the community, promoting and providing seminars, workshops, and consulting service. Announces three annual Entrepreneurs of the Year. SBAC staff serves as resource people on city and county programs, and chambers of commerce committees; provides information booths at trade fairs and community service shows; provides speakers for local civic clubs and as consultants to other economic development entities. *Audience*—Persons considering going into business, and persons presently in business who are facing a business problem or considering a new business-related opportunity. *Innovations*—Consultants are all degreed professionals who have owned businesses or have a history of performing consulting services for a fee. Consultants are all part-time. Major portions of seminars are presented by recognized community experts at no cost to the participant or the Small Business Assistance Center.

Structure: *Staffing*—Manager, assistant, three part-time counselors. *Advisory Board*—A board has been planned and soon will be implemented. the board will consist of seven members. *Funding*—The program is presently funded by the Job Training Partnership Act under Title II-A sub-section Employment Generating Services. The local Private Industry Council allocates the funds. *Program Evaluation* —Quarterly goals are set before year-end for the following year in these categories: Number of new clients counseled, number of returning clients counseled, full-day seminars produced, seminar attendees, new businesses started, new jobs generated. Goals are matched against performance each quarter.

Future Plans: Plans include becoming a subcenter of the University of Houston's Small Business Development Center. Five additional counties will be added to the three-county area presently served.

Advice: Hire a manager who is well known and respected in the business and banking community. Set reasonable goals and objectives. Involve the news media as soon as center is ready to open, and maintain a routine media/public relations program.

Contact: Roy Huckaby, Manager, 409/880-2254

Center for Entrepreneurship and Economic Development
Pan American University

Description: *Goals*—Serve as a catalyst for economic growth, jobs, and income in southern Texas. *Activities*—Secured financing for 10 businesses totaling over $1 million, creating over 200 new jobs and retaining 250 jobs, developed twenty business plans; completed five market studies, and four area economic profiles; sponsored two regional economic development conferences attended by over 400 businessmen and public officials; conducted research and Texas-Mexico border development strategies. *Audience*—South Texas entrepreneurs and public officials. *Innovations*—Core professional staff supervising a cadre of MBA graduate students.

Structure: *Staffing*—Director, associate director, six MBA graduate assistants, administrative assistant, secretary. *Advisory Board*—Three community and three university members. *Funding*--State funds, Foundation funds and government programs.

Future Plans: Expand current activities.

Contact: Dr. J. Michael Patrick, Director, 512/381-3361

Small Business Development Center
Pan American University

Description: *Goals*—To provide counseling, training, management and financial assistance to small businesses in South Texas. *Activities*—Counseled over 500 businesses, conducted twenty business development workshops attended by over 400 businessmen and women. *Audience*—Small businesses in South Texas. *Innovations*—Core professional staff supervising a cadre of MBA graduate students.

Structure: *Staffing*—Director, three MBA graduate assistants, secretary. *Funding*—Small Business Administration.

Future Plans: Expand current activities.

Contact: Dr. J. Michael Patrick, Director, 512/381-3361

Commercialized Technology
Texas A & I University

Description: *Goals*—To provide support services important to the development of small businesses related to existing resources that are abundant in the area. *Activities*—Development of mesquite lumber and furniture industry. Management of natural stands of mesquite. Development of Leuceana as an alfalfa substitute for South Texas. Development of research on cactus for fruit, vegetables and fodder. Development of a wholesale plant nursery. *Audience*—South Texas industry and government entities.

Structure: *Funding*—Initially the research phase was funded by a Meadows Foundation grant. In the operation phase, income will be generated.

Products: *Publications*—Various research publications.

Future Plans: Encourage the development of the type of small businesses that will help diversify the economy.

Contact: Dr. Peter Felker, Associate Resident Scientist, 512/595-3699

Economic Development Programs
Texas Woman's University

Description: *Goals*—Gathering and disseminating of economic data to the business community. Assisting in the selection of industry location to Denton. *Activities*—Assist in the development of an incubator program in Denton. Gathering of economic data about the general area. Working with the city and chamber of commerce in the identification of new industry and development of a program to attract new industry. Working with the North Texas Film Commission to attract movie industry. *Audience*—Current and prospective businesspeople of North Texas. *Innovations*—Planning stages of an incubator program unique to the area. Assisting the full-time economic developer with the chamber to develop a plan of action. Working with the city and chamber of commerce to fund an economic development office for the area.

Structure: *Staffing*—University—one person. Chamber of Commerce—one person. City—one person. *Advisory Board*—23 members through the Chamber of Commerce. *Funding*—Department of Business and Economics Program—State Funds. Chamber of Commerce program—1/3 by City through Utility Funds, 2/3 by the private funds of chamber of commerce members.

Future Plans: Expand into a research center at TWU for economic data collection and dissemination. Continue to work with the city and chamber to expand the economic development of the area.

Contact: Dr. Derrell W. Bulls, Chair, Department of Business and Economics, 817/898-2111

Economic Development Programs
University of Houston-Clear Lake

Description: *Goals*—To foster economic Development as part of institutional mission. *Activities*—Establish economic development foundation. Economic data bases. Applied research on economic development. Twenty-four-month program educational package to attract a local industry. Research parks. *Audience*—Business community. *Innovations*—Uniqueness is not the point—infusion of economic development interest throughout the university is.

Structure: *Staffing*—Probably 40-50 actively involved. *Advisory Board*—Thirty-five members. *Funding*—Folded into budget. Some grants. Some fees for services. *Program Evaluation*—Economic development of area.

Products: *Publications—Houston World Trade Center Task Force Report. East Texas 2000 Report on Economic Development. Strategies for the New Texas Economy Awards and Recognition* —Houston Mayor's Spirit Award.

Future Plans: The emphasis on economic development will continue. Here we believe in doing it, not talking about it.

Advice: Presidential support essential. Just do—don't plan endlessly. Get the local business community involved

Contact: Thomas M. Stauffer, President, 713/488-9336

Victoria Small Business Incubator Project
University of Houston-Victoria

Description: *Goals*—Short term: To offer entrepreneurs who have new ideas and new technologies a better chance of success. Long term: To stimulate and diversify the local economy through the creation of jobs. *Activities*—UH-Victoria president, dean of business, and SBI director have been an integral part of the coalition planning the incubator and bringing it into existence. The SBI is responsible for day-to-day management of the incubator. *Audience*—The program is directed toward the small business entrepreneur. *Innovations*—The project involves University, City of Victoria, and local businessmen. Selection and support activities are the responsibilities of not-for-profit groups; seed capital is to be offered by a for-profit organization made up of local business people.

Structure: *Staffing*—Full-time director, full-time secretary/receptionist, and part-time counselor. *Advisory Board*—Victoria Incubator Foundation Board, eleven members. *Funding*—The program is funded through a combination of city, state, and private sources which will be used for rent and services. *Program Evaluation*—Measurable outcomes would be successful business starts from the incubator experience.

Contact: Robert Lawson, Director, 512/576-3151

University Center for Economic Development and Research

University of North Texas

Description: *Goals*—To assist the region and state in the attraction and retention of business organizations; to provide educational training to enhance the employment base for firms and organizations; to participate in the site selection and other data base information systems that compose the economic development package; to assist North Texas communities and businesses in the their economic development efforts; to establish funded research and development projects with public and private sector groups. *Activities*—To establish seminars and other educational experiences directed to increase the knowledge base; to provide informational/data base requirements for both general and specific projects; to assist the economic development activities of private and not-for-profit local, regional, and state organizations, including the collection and analysis of regional economic data for planning and evaluation; to develop a labor availability model for future use in development studies. *Audience*—Industry, developers, state and local agencies, economic development programs. *Innovations*—Multidisciplinary approach to facilitate development of unique, cost-efficient determinants for prospective or new organizations and upgrading of skilled and managerial levels of employees in existing organizations; development of business plans for new and existing organizations.

Structure: *Staffing*—Center is currently being organized and will include some existing programs, but the structure is incomplete at the present time. *Advisory Board*—Not yet formed, in planning stages. *Funding*—Not institutional funding; to be funded from individual sponsored research and general projects. *Program Evaluation*—By directors of specific, disciplinary centers, by the market place.

Future Plans: As the center develops to full potential, its scope will be increased to encompass all major areas of economic development; the possibility of selling economic data and consulting services is being considered; location and feasibility studies, as well as other market research, will be a focal point.

Advice: Institutional funding support would enhance near-term results.

Contact: Dr. Jay A. Smith, Jr., Dean, College of Business, 817/565-3037

Economic Development Programs

University of Texas at San Antonio

Description: Goals—To provide management and technical assistance to small and minority business in the San Antonio-South Texas area. To provide management and technical assistance to local governments in the South Texas area involved in economic development. *Activities*—Assisted in over 350 businesses in the local area. Provided management and technical assistance to ten local governments in the area. Conducted twenty-five workshops/seminars on economic development and small business issues. *Audience*—Services are provided to minority and small businesses throughout the area as well as local governments. *Innovations*—the economic development programs have been totally integrated into the college of business at the university. Faculty and students are involved in all aspects of service delivery. The centers also serve as a learning laboratory for students and as a source of case studies for faculty members. The centers are entirely self-supporting. The Center for Entrepreneurial Development was established specifically to identify emerging and developing entrepreneurs in the area. Over a period of six months, and in groups of twenty, these entrepreneurs are nurtured through a developmental program that involves seminars, executive sessions, site visitations, networking, etc. The program has received a great deal of statewide and national attention.

Structure: *Staffing*—Each of these centers has a program director who is responsible for the day to day operation of the program. The four center directors report to the associate dean of the college. *Advisory Board*—An advisory board exists for the Center for Entrepreneurial Development. There are fifteen members on the board, which is chaired by Mayor Henry Cisneros. *Funding*—Small Business Administration, Minority Business Development Agency, Economic Development Agency. *Program Evaluation*—Various measures for evaluation exist such as jobs created, capital opportunities secured, market opportunities secured, number of businesses served, assessment by those who receive services, etc.

Products: *Publications*—Various reports and surveys are generated and published by the centers. *Awards and Recognition*—Over the period of five years, the centers have received numerous awards including special recognition from the funding agencies, government agencies, professional trade associations, etc. The economic development programs of the university were showcased in a study sponsored by the AASCU and The National Association of Management and Technical Assistance Centers.

Future Plans: The Center for Entrepreneurial Development will be expanded—through foundation funding—over the next two years so that its funding can be tripled. The Small Business Development Center will be expanded from the present three centers to approximately seven centers throughout the South Texas area.

Advice: Join the National Association of Management and Technical Assistance Centers. This association is an excellent information resource. Visit as many campuses as possible that are currently engaged in economic development programs.

Contact: Jude Valdez, Associate Dean, College of Business, 512/224-1945

Business & Economic Research Council

University of Texas at Tyler

Description: *Goals—To* provide a vehicle for coordinating all economic development programs currently sponsored by The University of Texas at Tyler; to provide a communications link in the East Texas region to encourage innovative economic development programs; to establish UT Tyler as a major resource for the support of economic development programs in East Texas. *Activities*—To serve the needs of developing and mature small business units through the Small Business Institute; to provide consulting services for regional and local governments through a center for policy studies; to provide technological training programs in cooperation with area manufacturing concerns through a technology partnership program; to provide a data base as the East Texas Regional Center for the Texas Innovative Network System; to develop a regional business newletter; to expand executive management development programs; to foster allied communities' service projects such as wellness programs and health maintenance programs. *Audience*—The sixteen-county East Texas geographical region.

Structure: *Staffing*—Coordinator with logistics support as needed. *Program Evaluation*—Inasmuch as this program was not formalized until July 1987, it will be six months to a year before any substantive evaluation can be made.

Contact: Dr. Tim D. Kane, Professor of Business Administration, 214/566-1471 x236

Center for Energy and Economic Diversification

University of Texas of the Permian Basin

Description: *Goals*—To utilize the existing economic base of the Permian Basin by introducing new, yet similar, technology from various sources in the United States. *Activities*—Obtaining financing, prototype building, testing, and production of an innovative drill bit and an innovative helicopter; computer simulation projects that aid in matching needs, as well as research testing; and matching companies outside the Permian Basin with companies within the Permian Basin that are compatible, in conjunction with the local chambers of commerce. *Audience*—Entrepreneurs, manufacturers within the Permian Basin; Investors. *Innovations*—CEED is a "ground floor" operation. It utilizes the faculty and staff of the university, as well as other existing centers of the University of Texas System, to aid in the formation of profitable, job-producing companies.

Structure: *Staffing*—Eleven: executive director, an administrative associate, a research engineer, four consulting engineers (Ph.Ds), and four consulting business experts (Ph.Ds). *Advisory Board*—Eleven members. *Funding*—Annual funding from the Odessa Industrial Development Council, plus generated income from various projects, of which CEED takes an equity position. These funds are used to sustain the day-to-day operations and maintenance of the program. *Program Evaluation*—Success is measured by a CEED business that becomes operational and produces jobs for the Permian Basin, or a product that produces jobs which are economically diverse from the existing economic base.

Future Plans: Continue evaluating potential products/businesses, as well as developing property that has been given to CEED which will house the staff, library, computer center, and laboratory.

Advice: Obtain sufficient funding up front. Get a clear vision of what the program is meant to accomplish and how it should be implemented.

Contact: Dr. H. Warren Gardner, Executive Director, 915/367-2388

Vermont

Small Business Support
Castleton State College

Description: *Goals*—To assist small businesses in creating their business plan as they seek funding. *Activities*—Advanced business students work with small business proprietors to develop their case for funding. *Audience*—Small businesses. *Innovations*—Students work one-on-one with business owners.

Structure: *Staffing*—Castleton students serve as consultants and receive college credit. *Advisory Board*—The business administration program has an advisory committee of ten local and state representatives of business and industry. *Funding*—SBA. *Program Evaluation*—Evaluated by the students, SBA, and businesses.

Future Plans: Continue the program.

Advice: Start with just a few cases and choose your students carefully.

Contact: Barbara Foley, Chair, Business Administration Department, 802/468-5611

Virginia

Project NEED
Clinch Valley College

Description: *Goals*—To help citizens in the region with entrepreneurial spirit begin their own enterprises. *Activities*—Major activities address the components of a typical business plan: marketing, production, finance, mission statement, goals and objectives, etc. *Audience*—Citizens in a three-county region in southwestern Virginia. *Innovations*—Many groups in the region have identified topics of interest and have brought the program's small business advocate in to conduct seminars and training sessions.

Structure: *Staffing*—One person serves as small business advocate, with the chief responsibility of counseling interested clients. *Advisory Board*—Three members. *Funding*—JTPA grant. The program does not generate income. *Program Evaluation*—The primary mechanism of rating the program's success is through numbers of clients counseled and the eventual number who begin a business.

Products: *Publication—Southwest Virginia Business Resources Directory—1986. Awards and Recognition*—Written up in many of the local and regional newspapers (*Bristol Herald, Kingsport Times, Coalfield Progress*).

Future Plans: Incorporate the program into a nonacademic component of ongoing college activity.

Advice: Carefully identify all available resources. Be willing to find quick answers to client questions. Possess skills in the field of business.

Contact: Dr. Guy V. Briggs, Assistant Director of Continuing Education, 703/328-2431 x260

Longwood Business Innovation Center

Longwood College

Description: *Goals*—To strengthen the region's business and industrial competitiveness in domestic and international markets by serving as a resource and educational outreach unit in support of programs that inspire economic development, entrepreneurship, and human resource development. The LBIC has four primary objectives: to help stimulate economic, industrial, and community development programs; to improve new enterprise formation and development; to enhance the level of productivity and human resource development; and to improve organizational development methods and processes. *Activities*—Provides networking assistance, help in identifying sources of information or services related to the center's key result areas. Has developed a large interactive network and has direct contact with state economic development systems, industrial development and planning groups, the U.S. Department of Commerce, Federal Laboratory Consortium, technology transfer systems, venture capital community, entrepreneurship programs, incubators, and organization development and productivity groups. Offers presentations. Produces business planning workbook. Provides information, resource guides, computer software packages, workshops. Offers an "Innovation Evaluation Package" to provide clients with information and guidelines before they invest time, effort, and money in attempting to develop an idea or invention. Conducts preliminary patent searches. Enhances productivity, facilitates technology transfer. Offers formal courses. Disseminates reports and summaries. Conducts industry, state, and regional economic comparisons and economic profiles. Also monitors major state-by-state initiatives in economic development, commercialization of innovative technology, application of technology to strengthen existing industry, training/retraining the labor force, and capital formation incentives, and makes the comparative findings available to the public. *Audience*—Industrial development authorities, industrial development corporations, local economic development groups, chambers of commerce, development councils (city, private, etc.) long-range planning groups, entrepreneurship programs, new venture teams, and incubation centers. *Innovations*—Many approaches have been designed that combine the key areas of the center. The approach and philosophy is highly complementary to the development efforts for the future of the region. Activities of the center are consistent with the region's emphasis on attracting new industry, as well as expanding existing industry.

Structure: *Staffing*—Executive director, deputy director, faculty, research associates, and private consultants. *Advisory Board*—The Management Advisory Board has six members. A Center Advisory Board will be appointed from a wide spectrum of business, industry, and other organizations. *Funding*—From the Commonwealth of Virginia, Longwood College, Longwood College Foundation, Inc., Virginia Center for Innovative Technology and South Central Private Industry Council. *Program Evaluation*—The basic mechanism is a "Center Review," which is provided to the Management Advisory Board periodically, covering results of operation and a summary of major activities. The center's objectives, plans, policies, and procedures are presented to the MAB for approval as necessary. The dean of the school of business and economics provides ongoing formal appraisal of activities. Client activity reports are kept continuously on all projects, and the dean is kept apprised of all project efforts. Standards of performance are continually discussed by the executive director and the dean. Examples of performance standards include the number of information requests handled by the center, the delivery of quality project work, organizational assistance in identifying and establishing demonstration projects, and the development of sound frameworks for education delivery systems (workshops, seminars, conferences, etc.)

Products: *Publications*—Newsletters, manuals, workbooks, software, working papers, technical reports, and research reports. *Awards and Recognition*—The center was cited in a bulletin distributed by the National Alliance of Business and the U.S. Department of Commerce (OPTI) on projects that represent innovative approaches to economic development throughout the United States.

Future Plans: Expand the distribution of the newsletters. Provide special programs such as the LBIC information exchanges, a Southside Virginia business innovation lecture series, a rural entrepreneurship conference, the development of several entrepreneurship short courses, and the development of an entrepreneur grid seminar. Continue marketing the grid management program to established business. Establish a project and research funding pool, and an applied action research program to target such areas as shared flexible manufacturing systems, rural incubators, informal venture capital systems, technology transfer systems, rural plant location and relocation patterns, and structural analyses of rural industries.

Advice: Develop a consensus among key individuals. Develop a support network among state and federal governments, the economic development community, the college/university community, and the private sector. Review missions and objectives and assess their internal and external strength and weaknesses, consider all options available, and all interests involved. Ascertain how the center will fit into the institution's overall development strategies as well as the economic development strategy of the service area. Maintain a flexible approach in order to respond to a diverse set of circumstances unique to the local and regional economy.

Contact: Lawrence C. Minks, Executive Director, 804/392-9330

Entrepreneurial and Private Enterprise Center

Old Dominion University

Description: *Goals*—To provide necessary and appropriate professional expertise in business assistance to existing and new business ventures. To coordinate a network of business information. *Activities*—Currently developing the required framework to take an active role with the private sector, thus becoming directly involved in new business formation and market development, including management counseling and followup. The University Small Business Institute and entrepreneurial courses will complement the activities of the center and provide hands-on business experience for students. *Audience*—Existing businesses, entrepreneurs. *Innovations*—Educational programs designed to meet the unmet needs of the regional business community. The needs are explored, and then addressed. The program coordinates public and private resources, both financial and educational.

Structure: *Staffing*—Currently an interim director, university faculty. A secretary is to be hired. *Advisory Board*—Board of directors. *Funding*—Grant from the Virginia Center for Innovative Technology. Regional matching funds. It is planned that the center will generate funds through fees. *Program Evaluation*—Criteria under study.

Future Plans: Continue growth. Increase emphasis on educational programs utilizing full university resources. Further develop resources network, both public and private.

Contact: Charles A. Hendrickson, Interim Director, 804/440-3557

Office of Industry Relations

University of Virginia

Description: *Goals*—To improve performance in working with state agencies on economic development, and in developing cooperative relationships with business, industry, and government. *Activities*—Develops formal cooperative relationships between the university and business and government. Fosters economic development through interaction with state agencies, particularly the department of economic development. Maintains a data base of university resources for use by businesses. *Audience*—State and local economic development agencies and business, firms in Virginia. *Innovations*—The vice provost chairs a University-Industry Council composed of representatives from the university and industry. The council will assist the vice provost in developing cooperative relationships and in fostering economic development through the use of university resources.

Structure: *Staffing*—Vice provost, systems analyst, and secretary. *Advisory Board*—Seven members, composed of vice presidents and associate vice presidents of the university. *Funding*—University. The program does not generate income directly. *Program Evaluation*—Mainly qualitative, although there are quantitative measures such as the number of faculty resources employed and the research dollars generated as a result of the efforts of the office.

Future Plans: Develop full-scale operations.

Contact: Dr. Eve L. Menger, Vice Provost for Industry Relations, 804/924-7560

University Business Innovation Center
University of Virginia

Description: *Goals*—To assist in economic development of the Charlottesville area by supporting fledgling high-tech businesses. *Activities*—Provides space and services such as secretarial and accounting support, as well as business advice. *Audience*—Start-up businesses, faculty and local business people who might provide support. *Innovations*—Operated as a subsidiary of the University Real Estate Foundation.

Structure: *Staffing*—Director, secretary. *Advisory Board*—Eleven members, from the local business community and the University of Virginia. *Funding*—Start-up funds provided by the Center for Innovative Technology and matched by the University of Virginia. Additional funding obtained through gifts and rent of the facility. *Program Evaluation*—Based in part on the number of small companies that have developed to the point where they can compete in the market place. Also measured by the number of firms in the incubator.

Future Plans: Provide a location and space for graduates of the incubator.

Contact: David Bass, Chairman of the Board, 804/979-2860

Richmond Technology and Enterprise Center (RTEC)
Virginia Commonwealth University

Description: *Goals*—To promote economic development of downtown Richmond by fostering small business development. *Activities*—RTEC is a nonprofit organization and small business incubator that provides two essential services to start-up businesses: (1) an information and referral service to provide access by small businesses to university faculty and business professionals for assistance with management, technology transfer, and securing operating capital, and (2) business location in a common facility and a set of shared services, thereby reducing the costs of going into business. *Audience*—General audience of small businesses. Particular focus on companies that can benefit from access to VCU's research strengths in biomedical technologies, thereby forming a basis for an emerging biomedical industry in Richmond. *Innovations*—Capacity to join university resources with government and business interests in local economic development through technology transfer.

Structure: *Staffing*—Full-time administrative assistant and a part-time manager. *Advisory Board*—Ten-member board of directors, forty-member advisory board. *Funding*—RTEC will be self-supporting from rent income after two years of operation. The City of Richmond is providing $50,000 to offset a start-up deficit. Local corporations are contributing funds to assist with building renovations. VCU provided a part-time salary to a staff member to assist a community task force in developing RTEC.

Contact: Thomas C. Little, 804/648-7832

Washington

WSU Research and Technology Park
Washington State University

Description: *Goals*—To provide consulting opportunities for the faculty, to provide employment opportunities for students and their spouses, to enhance the research environment at WSU, to broaden the economic base of the city, county, region, and state. *Activities*—Initiates and encourages industry interaction with the university by marketing the university's research strengths through conferences, a national ad campaign, brochures, campus visits by industry, and direct calls on industry. *Audience*—Industry, with a strong emphasis on biotech companies. *Innovations*—The park offers industry a prime location next to the WSU campus. Companies can access personnel, equipment, services, and facilities on a time-available, low-cost basis. The park encourages business spin-offs based on university research and attracts outside tenants who can benefit from a location next to a strong research group.

Structure: *Staffing*—Director, assistant director, assistant to the director, secretary. *Funding*—University. Financial assistance for the program also comes from the developer through a finder's fee for securing leases on space, ground lease, and funds for marketing expenses. *Program Evaluation*—Signed leases, research contracts, technology transfer, and the economic benefits of expanding the region's job base.

Products: *Publications—Research Connection*, newsletter, numerous individual brochures on specific topics.

Future Plans: Fully develop this twenty-year project to eventually cover 126 acres of land with the potential of employing 2,400 employees.

Advice: Evaluate the audience and the product to see how your program can fill a market niche.

Contact: John R. Schade, Director, 509/335-5526

West Virginia

Center for Economic Action/Small Business Development Center

Concord College

Description: *Goals*—To promote economic development in West Virginia by assisting existing small businesses and creating new ones. *Activities*—Provides managerial and technical assistance, information on availability of financial resources, loan packaging assistance, education and training events, assistance in state and federal procurement, advocacy with state and federal agencies, and legislative support for small business issues. *Audience*—Present and prospective small business owners/managers in southern West Virginia. *Innovations*—One-on-one, free, confidential counseling for present or prospective owners/managers. Statewide networking with other SBDCs and other state and federal agencies to leverage resources.

Structure: *Staffing*—Program manager, business analyst, office manager, secretary. *Advisory Board*—None at present. There is a statewide SBDC advisory board consisting of twenty-four members. *Funding*—In-kind and cash from the sponsoring college, matching funds from SBA. *Program Evaluation*—Through deliverables such as number of clients counseled, number of participants in training activities, number of jobs created, new business start-ups, value of loan packages submitted.

Products: *Awards and Recognition*—Outstanding West Virginia SBDC Chapter in 1984.

Future Plans: Develop a close working relationship with the academic community to promote entrepreneurship at the college level. Increase program exposure in rural southern West Virginia counties.

Advice: Consider alternative (nongovernmental) sources of funding to give the program permanence. Develop close relationships with all groups involved in economic development in order to leverage resources.

Contact: Dean R. Kenney, Program Manager, 304/384-9811

Center for Applied Business, Engineering, and Technology

West Virginia Institute of Technology

Description: *Goals*—To assist business, industry, and/or government units with any problems that the faculty and staff of West Virginia Tech are capable of dealing with or to advise on other sources of assistance. *Activities*—Has assisted many inventors in evaluating the technical capabilities and the manufacturing techniques of their products, assisted small businesses with manufacturing techniques and product reliability, assisted municipalities in economic and marketing surveys, and supplied technical consultants for various industries as needed. CABET also operates a Small Business Development Center which performs all of the usual functions of such an operation. The WV-Tech SBDC has been designated as the Technical Assistance Center for the entire State SBA Network. *Audience*—Business, industry, and government in West Virginia. *Innovations*—The assistance that

CABET provides for small businesses and inventors is done either at no cost or at minimal cost to the client. CABET has operated with small EDA grants and by using graduate assistants to deliver its services.

Structure: *Staffing*—CABET director, SBDC program manager, one secretary. *Funding*—Two staff positions funded by regular state appropriations, one funded by SBA. The program is beginning to generate a small amount of income through overhead on grants and contracts. Funds have not been spent at this time. *Program Evaluation*—Through number of satisfied clients.

Products: *Awards and Recognition*—SBA Innovator Advocate of the Year 1987.

Future Plans: Continue the present program, publicize the CABET program throughout West Virginia, generate more funded contracts, and serve more clients.

Advice: Keep the program within the scope of institutional capabilities. Convince the departmental chairs and key faculty members of the worth of the program, and obtain their support.

Contact: Stafford E. Thornton, Director, 304/442-3162

Wisconsin

Small Business Development Center
University of Wisconsin-La Crosse

Description: *Goals*—To provide all needed areas of management assistance to existing and new businesses. *Activities*—Individual counseling in all management areas (production, accounting, financial, marketing) to small business owners or managers (under 500 employees) utilizing university faculty members and other professional counselors. Services are provided at no cost to the clients within eleven counties of Wisconsin. *Audience*—Existing and new businesses in southwestern Wisconsin. *Innovations*—Close working relationships with Service Corp of Retired Executives.

Structure: *Staffing*—Director, program assistant, graduate assistant and over thirty counselors (on call). *Funding*—Federal grant through SBA, state and university designated support. No charge to clients, no income generated. *Program Evaluation*—Number of clients served, evaluations done by clients, periodic economic results—i.e., number of jobs generated and/or saved, business revenue impact.

Products: *Publications*—Publicity brochure.

Future Plans: Relocate facility from third to first floor and double the space. Acquire and use audiovisuals primarily to assist people interested in starting a business. Develop computerized procedures to assist business plan development.

Advice: Contact several existing business development centers to review their operations.

Contact: A. William Pollman, Director, 608/785-8782

Small Business Institute
University of Wisconsin-La Crosse

Description: *Goals*—To provide free management assistance to small businesses while also providing a realistic learning module supplement to university class experiences. *Activities*—Student teams of 1-4 members work closely with a small business for approximately three months to resolve a management problem or develop a business plan. Areas of examination primarily involve market research, financial analysis, marketing, advertising plans, and comprehensive business plans. *Audience*—Small-business (less than 500 employees) owners or managers. *Innovations*—Classes in all areas of business functions are offered, rather than just one general class.

Structure: *Staffing*—Director, program assistant, graduate assistant. *Funding*—Stipend for completed cases from SBA. University overhead support. *Program Evaluation*—Evaluation of project by faculty supervisor, client evaluation form, review of case by SBI administrators, case evaluation by SBI.

Products: *Publications*—Promotional materials.

Future Plans: Continue program and expand the range of management services available to small business clients.

Advice: Use programs like this to simultaneously foster student development while assisting in economic development. Contact existing centers to review operations.

Contact: A. William Pollman, Director, 608/785-8782

Office of Industrial Research and Technology Transfer
University of Wisconsin-Milwaukee

Description: *Goals*—To facilitate transfer of technology from the University of Wisconsin-Milwaukee to industry to promote economic development. *Activities*—Developed several collaborative research programs and is forming others. On a continuing basis the office informs individual companies of capabilities at UWM and identifies and evaluates UWM intellectual property for commercial purposes and transfer to the private sector. *Audience*—Primarily, Wisconsin business and industry. However, businesses outside Wisconsin can be involved, especially in the transfer of intellectual property. *Innovations*—The office combines the activities of collaborative programs with industry, intellectual property, and consulting agreements with faculty and businesses.

Structure: *Staffing*—Director, assistant director, program assistant. *Advisory Board*—Presently being formed—eight members anticipated. *Program Evaluation*—Revenue generated from collaborative programs and transfer of intellectual property (licensing), improved condition of specific businesses and companies through transfer of technology, and benefits to faculty and possible research efforts resulting from transfer and involvement.

Products: *Publications*—Pamphlets: "Collaborative Programs with Industry," "Commercializing of Intellectual Property at UWM."

Future Plans: Offer 1-3 symposia per year directed to specific technologies in which active research is underway at UWM. Operate an active licensing program.

Advice: Ensure university commitment to economic development, adequate funding to meet promotional requirements, qualified personnel.

Contact: Irving D. Ross, Jr., Director, 414/229-5000

Center for Innovation and Development
University of Wisconsin-Stout

Description: *Goals*—To promote university/industry interaction in the region. To create opportunities for faculty development through funded projects. To support economic development through technology transfer, particularly manufacturing. *Activities*—Emphasis on applied research, solving real problems for business and industry sponsors through process automation, building prototypes of innovative processes or products, testing new concepts in improving material properties (i.e., powdered materials). *Audience*—Public and private agencies. Privately held business and industry sponsors are the principal sponsors of projects. *Innovations*—Technical assistance projects and some instructional programs are delivered at the plant site. In two projects, university employees work on projects at plant sites 100 or more miles from the university. Forty-hour process control workshops have been held for the engineering staff of a multinational company at fifteen different locations around the nation.

Structure: *Staffing*—Director, secretary, faculty and students on a project-by-project basis. *Funding*—Director and secretary positions supported by state appropriation funds. All other support provided by project revenue. *Program Evaluation*—Based on number of successfully completed projects (satisfied customers) and public recognition for effective work performed.

Products: *Awards and Recognition*—IH/UW-Stout technology transfer project received the Arthur D. Little award for economic development project of the year.

Future Plans: Expand efforts to provide assistance to regional manufacturers for productivity improvement. Develop consortia to support advanced work in manufacturing management and technology. Expand work in materials science area.

Advice: Select an area for specialization.

Contact: Dr. John F. Entorf, Director, 715/232-1252

Incubator
University of Wisconsin-Stout

Description: *Goals*—To facilitate regional economic development. To provide a sheltered environment for emerging enterprises. *Activities*—Provides affordable facilities, services, and professional support for projects in an effort to reduce the start-up costs and ease the way for new ventures into the private sector. *Audience*—Prospective entrepreneurs in the region. *Innovations*—These autonomous enterprises are housed on campus in the midst of UW-Stout industrial facilities and programs.

Structure: *Staffing*—One incubator director serves three incubator client companies. *Advisory Board*—Management board, seven members; advisory board, nine members. *Funding*—Fees $3,300/ year. Authorization, depreciation, maintenance, and expenditures funds contributed by the school of industry and technology. *Program Evaluation*—Through progress, growth, and improvement of client companies, success of client companies after exit.

Future Plans: Continue to provide shelter for developing enterprises.

Contact: Charles E. Yost, Director, 715/232-2294

Small Business Development Center
University of Wisconsin-Stout

Description: *Goals*—To assist private inventors, individual entrepreneurs and small businesses in developing new ideas and bringing them to the market place. *Activities*—Assists clients with engineering evaluations of product ideas, developing processing solutions and building prototypes of novel ideas. Provides marketing assistance to bring technical ideas to fruition. Counsels clients in the patenting process. *Audience*—Any citizen or small business in Wisconsin.

Structure: *Staffing*—Director and secretary; technical assistance provided through staff and servants. *Funding*—Federal and state dollars. *Program Evaluation*—Follow-up questionnaire for clients served, evaluation by the funding agencies.

Future Plans: Continue to provide assistance to small businesses in technical areas and to assist inventors and entrepreneurs.

Advice: Choose your program efforts carefully.

Contact: Dr. John Entorf, Director, 715/232-1252

Center for Economic Development
University of Wisconsin-Superior

Description: *Goals*—To provide a full array of services ranging from direct assistance to consulting and liaison activities in the areas of community economic analysis and development. *Activities*—The four-session community Economic Analysis Program is available to all communities in the service area. It takes a group of community leaders through a detailed analysis of their community's economic situation and helps them identify specific opportunities available to increase jobs and income. Other activities include: demographic analyses, publication of a monthly economic newsletter, research design and implementation, and general economic education. *Audience*—Groups, agencies, and organizations interested in projects and activities related to economic development.

Structure: *Staffing*—Director, student assistants. *Funding*—From University of Wisconsin-Extension. *Program Evaluation*—Through University of Wisconsin-Extension procedures.

Products: *Publications—Development Trends* (monthly).

Future Plans: Expand efforts into applied economic research specific to immediate service area. Provide relevant economic information to local and county decision makers.

Advice: Work and stay familiar with related organizations to avoid overlap and to facilitate joint efforts. Be prepared to "market" your organization's existence and activities. Develop political awareness and responsiveness.

Contact: Jerry Hembd, Director, 715/394-8208

Small Business Development Center
University of Wisconsin-Superior

Description: *Goals*—To provide easily accessible management assistance and education to the small business owner/manager. *Activities*—One-on-one counseling provided to over 100 existing businesses and new ventures annually. Counseling available in all areas of business management. Over fifty seminars, designed specifically for the small business manager, conducted throughout the region annually. Seminar topics range from financial, marketing, personnel management to business feasibility. *Audience*—Small business owners and managers. *Innovations*—The programs are offered in various locations throughout the region to make them easily accessible.

Structure: *Staffing*—Director, counseling coordinator. *Advisory Board*—Each county has ad hoc advisory committee selected annually to help with program identification. *Funding*—From UW-Extension SBDC which receives funds from state and federal sources. Programs also generate some funds used to provide additional service. *Program Evaluation*—Seminars evaluated at end of program for value, relevance of content, effectiveness of instructor. Annual impact outcomes evaluated by a survey of attendees to determine self-reported impact of education on their business operation. Counseling is evaluated by state office on impact on business and value of services provided.

Future Plans: Continue current level of programs and counseling. Work more closely with other providers to maximize services available and minimize duplication.

Advice: Become familiar with and work closely with other agencies and organizations. Be accessible to potential clients by making presentations and attending events of interest to client groups. Don't assume you can determine what people need and how they want to learn (use advisory boards, etc., to gain insight.)

Contact: Tuula Harris, Director, 715/394-8351

Technology Transfer Program

University of Wisconsin-Whitewater

Description: *Goals*—To stimulate economic development in Wisconsin by bridging the gap between invention and innovation through the transfer of new products to existing manufacturers. *Activities*—During fiscal 1987, the program received over 200 inquiries about possible assistance. Over one hundred inventors, entrepreneurs, and manufacturers received assistance. One client has signed on as a tenant in a business incubator, and two other clients have successfully introduced products on a national basis. One client recently received Phase II financing through the Small Business Innovation and Research grant program. *Audience*—Independent inventors, entrepreneurs, and Wisconsin-based manufacturers. *Innovations*—The program has two major orientations: "market pull" and "technology push." Through "market pull" the program attempts to identify new product needs of Wisconsin manufacturers. The Technology Transfer Program then searches its data base of previously evaluated inventions to match an invention with a manufacturer's need. The "technology push" involves an in-depth commercial evaluation of an invention idea and, if needed, construction of a prototype. Typically, the inventor has patented an idea and demonstrated that the product has market application before seeking assistance through the Technology Transfer Program.

Structure: *Staffing*—Director, program assistant, numerous graduate and undergraduate students, technical consultants. *Advisory Board*—Sixteen members. *Funding*—Through the University of Wisconsin-Extension. There are no provisions for generating income. *Program Evaluation*—The criteria for success vary, depending on the clients served. An independent inventor who successfully licenses a product to a manufacturer, or an entrepreneur who raises sufficient investment capital, would constitute success stories from the perspective of the program.

Products: *Publications—Technogram* (newsletter).

Future Plans: Continue to strengthen the working relationship with Wisconsin's manufacturing community, along with networking new product innovations. Serves as important source of new product innovation, providing the flexibility needed for the state's economy to merit national and foreign competition.

Advice: Make sure there is sufficient funding to achieve the goals and/or missions of the program. Avoid duplicating services or programs of assistance already in existence.

Contact: Randall D. Olson, Director, 414/472-1600

Category B

Multiple Services for a Specific Audience

Programs offering several different kinds of economic development assistance but limiting the recipients of the service by type of industry (such as manufacturing, high technology, food processing) or by sector of the population (such as displaced workers).

Arizona

Center for American Indian Economic Development
Northern Arizona University

Description: *Goals*—To provide technical assistance in areas of economic development for Arizona reservation-based, Native American enterprises. *Activities*—Provides technical support primarily in business-related areas such as market analysis, financial projections, and feasibility studies. Provides assistance primarily with faculty members from Arizona's three universities for projects on seven reservations. Services have included management audits for a car dealer, a business plan for an electronics company, and a feasibility study for a fuel-wood business. *Audience*—Native American enterprises on Arizona reservations. *Innovations*—Applications of university-based human resources, usually on a team basis, from multiple disciplines to support economic development on Indian reservations.

Structure: *Staffing*—Director, coordinator, administrative assistant, secretary. *Funding*—Arizona state legislature. *Program Evaluation*—Jobs created or retained, attendance at seminars, maintenance of or increase in profitability.

Future Plans: Expand from the present operating base into service for additional Arizona reservations. Increase involvement of nonbusiness faculty members (forestry, geography, engineering) and the participation of Native American students. Establish an advisory board.

Contact: Wayne R. Fox, Coordinator, 602/523-3657

Arkansas

Genesis
University of Arkansas at Fayetteville

Description: *Goals*—To enhance economic development by stimulating technological innovation and fostering the growth of technology-based enterprises, thereby creating new employment opportunities for the citizens of Arkansas. *Activities*—Provides a business environment that offers more than just space for a nominal rental fee, including provision of utilities, janitoral services, security, conference room, reception, telephone access, and computer hardware and software access. Provides inhouse business consulting and technical expertise in both engineering and science. *Audience*—Companies or divisions of companies in the start-up stage having an innovative technical or scientific component in their business plan and able to demonstrate a successful future. *Innovations*—Clients are housed in two distinct facilities: the Engineering Experiment Station and the BioMass Research Center, each of which provides an environment conducive to the special nature of the patron's company.

Structure: *Staffing*—Project manager, administrative assistant, receptionist, secretary, principal investigator for technology, principal investigator for science. *Advisory Board*—Six members. *Funding*—Grant from the Arkansas Science and Technology Authority and rental income, used to cover incubator overhead. *Program Evaluation*—Program's ability to sustain itself, the successful exit of a client from the incubator.

Products: *Publications*—Marketing newsletter.

Future Plans: Make the incubator self-sustaining in order to provide jobs in Arkansas for a time period far beyond that of initial funding. Increase the number of clients and institute a program of nominal fees for incubator services.

Advice: In order to avoid future misunderstandings, have clear-cut entrance and exit policies and create leases that are not one sided.

Contact: Gerald B. Seiff, Project Manager, 501/575-7227

Economic and Industrial Development Center
University of Arkansas at Monticello

Description: *Goals*—To help local communities improve industrial developments. To develop and maintain demographic data for local communities. *Activities*—Works with several local industrial planning committees to develop profiles and to search for new industry. Works with the Arkansas Industrial Development Commission to implement its industrial cross-match program in southeastern Arkansas. *Audience*—Local government and community officials in southeastern Arkansas.

Structure: *Staffing*—Director, secretary, two part-time faculty members. *Funding*—State appropriation, no generated income. *Program Evaluation*—Client satisfaction with program development, applications submitted, industries located.

Future Plans: Continue the same emphasis but try to get individual communities to form a regional consortium rather than work independently in local communities.

Contact: Charles Higgins, Director, 501/460-1020

Florida

Institute for Building Sciences
Florida A & M University

Description: *Goals*—To serve as the research, continuing education, and technical assistance arm of the Florida A & M University school of architecture. *Activities*—Operates the Small Towns Assistant Clearinghouse, which directs private enterprise and public administration units of small towns to resources for economic and community development. Provides short courses for architects employed by major corporations, such as the 3M Company. Conducts ongoing investigation of intelligent buildings and provides the building industry with current information on the topic. This IBS research has an international linkage to the building industry, with subscribers from seven different nations.

Contact: Thomas Martineau, AIA, Director, 904/599-3244

Small Farm Research and Extension Program
Florida A & M University

Description: *Activities*—Operates under the FAMU Division of Agricultural Sciences. Carries out research on small farms problems and issues. Provides technical assistance to small farms to increase profitability of farming operations. County-based paraprofessionals and centrally located extension specialists are utilized to increase the effectiveness of service delivery. Meat goat research and viticulture research are prominent areas of diversified research activity, which is made available to the small farm business and industry.

Contact: Dr. Robert Bradford, 904/599-3383

Biomedical Research and Innovation Center (BRIC)
Florida International University

Description: *Goals*—To create a focus of biomedical research and a center of excellence. To establish a business incubator. To develop an innovation center and engineering clinic. *Activities*—Four incubators are operating, and a fifth is ready to move in. (There is a backlog.) The incubatees are a range of business types, but all are high-tech, associated with computer or biomedical activities, and are not yet or just about starting commercial phases of their business plans. They are given normal office services for a below-market rent plus a network of management support services. *Audience*—New or developing technologies or businesses desiring to locate in the county. *Innovations*—BRIC is a City of Miami-University-County partnership operated by the college of engineering and a board of directors representing a cross-section of industry, finance, law, accounting, medicine, hospital, university, and public institutions.

Structure: *Staffing*—President, director of operations, and director of research. *Advisory Board*—The board of directors is permitted twenty-five members. *Funding*—Public in-kind donations, state university operating funds, small rental and services income. *Program Evaluation*—Success includes initially achieving satisfactory incubator population, technical and commercial success of incubatees, ultimately measured by continued or increased community support.

Products:—*Awards and Recognition*—Broad-based press support of the economic development potential.

Future Plans: Achieve broader community support. Eliminate State University System cash support. Broaden activity to be fully an innovation center.

Advice: Ensure the program is based on stable public support. Involve industrial/commercial funding early in activities.

Contact: Gordon Hopkins, President, 305/554-2522

International Banking Center
Florida International University

Description: *Goals*—To serve as the principal institution for education and research in international banking in Florida, with offices on the Tamiami Campus and on Bricknell Avenue. *Activities*—Staff work closely with organizations representing all facets of international banking, including training programs and conferences on topics dealing with problems in international banking and finance.

Contact: 305/554-2771

Center for Banking and Financial Institutions
Florida State University

Description: *Activities*—Provides services to depository financial institutions in the form of research, professional development programs, and recruiting assistance. Acts as a vehicle for bringing together industry professionals, faculty, and students to help them keep abreast of important issues and developments affecting depository financial institutions. Services provided by the center, as a general rule, are tailored to each specific institution.

Contact: Dr. Robert Turner, 904/644-4220

Dick Pope Sr. Institute for Tourism Studies
University of Central Florida

Description: *Goals*—To improve the quality of the tourism product and increase the benefits of tourism for industry, the state, and the local community through research, educational activities, and public awareness programs.

Contact: Harvey S. Lewis, 305/275-2181

Center for Urban Design and Research
University of South Florida

Description: *Activities*—Supports the needs of the private architecture community by providing opportunity for continuing education, technical assistance, and design projects for graduate students.

Contact: David Crane, 813/974-4042

Illinois

Technology Commercialization Center
Southern Illinois University at Carbondale

Description: *Goals*—To assist in the commercialization of technology-based ideas, services, or products by providing such services as technical analysis, financial feasibility, research assistance, and business and technical data base searches. TCC uses a three-phase process: Phase I—Technical, Commercial and Financial Feasibility; Phase II—Technical, Commercial and Financial Development; Phase III—Commercialization. *Activities*—Assists with new projects and makes referrals, conducts feasibility studies, helps expand existing businesses. Operates Small Business Innovation Research Program, which entails convening conferences. Tracks eleven federal agency programs and disseminated synopses to businesses and individuals. Assists clients in developing proposals. *Audience*—Entrepreneurs from the university or the southern Illinois region who require development assistance for their technology-based business or for commercialization of a product.

Structure: *Staffing*—Director, assistant director, technical coordinator (consultant) three graduate assistants, one secretary. *Advisory Board*—An executive committee determines policy and approves projects above $7,500. *Funding*—Illinois Department of Commerce and Community Affairs (DCCA). Project income generated on case-by-case basis. SIUC Office of Economic Development provides a 40 percent match on grant. *Program Evaluation*—Program criteria established in scope of work submitted to funding agency.

Products: *Publications*—Cocontributor to *Connections*, a monthly newsletter distributed to all TCC clients. Studies: Cost of Logging in Illinois, Illinois Forest Products Industry, Illinois Dry Kiln Capacity and Potential.

Future Plans: Change housing to the Southern Illinois Small Business Incubator to provide assistance to tenant businesses.

Contact: Martha Cropper, Director, 618/536-7551

Louisiana

Commercializing University Technology
University of Southwestern Louisiana

Description: *Goals*—To recognize and develop technology within the university that has economic potential. *Activities*—Identifies and documents technology, assesses its commercial potential, determines which technologies are transferable, and provides income from the application or transfer of this technology. *Audience*—University faculty.

Structure: *Staffing*—Director of research and development.

Contact: Dr. Wayne Denton, Director of Research and Development, 318/231-6775

Mississippi

Economic Development Action Plan
Mississippi State University

Description: *Goals*—To promote economic development (job creation and income enhancement) primarily for agriculture. *Activities*—Direct support provided via action teams and committees. Most directly involved in economic development are the following teams/committees: increased profitability, diversification of agricultural income, stimulation of in-state processing, financial management, revitalization of rural communities, development of biotechnology, agricultural and forestry processing support. *Audience*—The people of Mississippi, especially individuals and firms in agriculture. *Innovations*—A comprehensive product development program. A program to provide technical support to agricultural and forestry processing industries.

Structure: *Staffing*—The division has over 900 employees, all involved in economic development activities because all work in the division is directed toward economic development, either directly or indirectly. *Advisory Board*—None per se. However, numerous mechanisms exist for obtaining input from industry representatives. *Funding*—State appropriations, federal formula funding, grants and contracts. *Program Evaluation*—Projects evaluated annually. Administrators monitor progress toward division goals on a continuing basis. Criteria for success depend on the nature of the task, but in general relate to completion of objectives, attainment of goals, and contribution to the economic development mission.

Products: *Publications*—Hundreds of reports, bulletins, and journal articles. *Awards and Recognition*—Numerous.

Future Plans: Continue to promote economic development in the state. Utilize division resources more efficiently and effectively.

Advice: Assess the needs and strengths of your state, region, or locale and build your program around them. Recognize that fostering the welfare and economic viability of existing firms and plants is just as important as attracting new industries. Recognize complex nature of economic development and address all facets of the problem.

Contact: Dr. R. Rodney Foil, Vice President for Agriculture, Forestry, and Veterinary Medicine, 601/325-3006

New Jersey

Business Incubator and Technology Transfer Center
New Jersey Institute of Technology

Description: *Goals*—To encourage innovation, to nurture advanced technology start-ups, and to support existing manufacturing firms seeking stronger links to the university research and information resources. *Activities*—A university-owned building was and continues to be renovated to meet tenant needs. Two tenants are currently located in the building: the New Jersey Tooling and Machining Institute and the U.S. Government Procurement Technical Assistance Center. A survey of NJIT faculty has been conducted, revealing widespread activity in all areas of research and consulting. Almost 40 percent of respondents indicated a desire to be involved in a small business start-up. *Audience*—Technology-related small and new businesses, particularly those in which NJIT faculty are involved. *Innovations*—The location of the procurement center and TMI in the facility will provide a web of support for other new and small businesses that locate in the building.

Structure: *Staffing*—No permanent full-time staff. *Funding*—Capital for initial renovations provided by the university. Rental payments from tenants used to fund future building renovations. *Program Evaluation*—Measured principally by the number of new and small businesses that locate in the facility and by their success.

Future Plans: Conduct follow-up interviews with faculty who have indicated a strong willingness to have space in the incubator. Form business services provider group to assist new businesses that locate in the incubator. Develop a marketing program to capture a broader clientele.

Advice: Try to find at least one "anchor" tenant who might be able to provide support services to other tenants. If you are renovating space, do so as tenants are identified so that their needs will be met as economically as possible.

Contact: Henry Mauermeyer, Vice President for Administration, 201/596-3124

Government Procurement Technical Assistance Center

New Jersey Institute of Technology

Description: *Goals*—To provide technical services to northern New Jersey small businesses to enhance their ability to obtain federal contract awards. *Activities*—Currently provides services to nearly 200 firms and assists them in securing approximately $1.5 million in government contracts. Conducts regular seminars and workshops in such areas as quality assurance and proposal preparation. Administers a Technical And Management Consultant Program under a grant from SBA. *Audience*—Small business community in eleven northern New Jersey counties. *Innovations*—Provides "Commerce Business Daily" searches for individual clients and employs a unique two-postcard system—one to the federal agency requesting a bid package for the clients and one to the clients advising them to expect the package. Maintains a complete federal and military specifications library.

Structure: *Staffing*—Director, assistant director, two marketing specialists, secretary. *Funding*—Cooperative agreement with the U.S. Department of Defense, university funds. *Program Evaluation*—Comprehensiveness of the service provided, number of clients served, and number of contract awards to clients.

Future Plans: Recruit clients more aggressively. Conduct a major outreach to New Jersey companies that can provide services to the federal government. Produce a bimonthly newsletter.

Advice: Be flexible in setting program goals and policies. Reevaluate client needs regularly, and modify your approach accordingly. Treat economic development as an educational process and realize that you must make clients understand the need to have appropriate tools if they are to succeed.

Contact: Dr. Michael Kelley, Director, 201/596-5819

Rutgers Minority Investment Program

Rutgers University

Description: *Goals*—To develop minority business enterprises. *Activities*—The Rutgers Minority Investment Company (RMIC) is a federally licensed Minority Enterprise Small Business Investment Company (MESBIC). Started in 1970, the company provides funds to small businesses owned by members of minority groups. With total capital of $2.4 million, of which approximately $1 million is private capital, the investment company has made 236 investments totaling $.5 million during its seventeen-year history. *Audience*—Minority businesses. *Innovations*—The only investment company of its kind affiliated with a graduate school of business. As part of Rutgers University Graduate School of Management, the investment company serves the dual role of minority business development and business education. MBA students at Rutgers have the opportunity to work with the businesses financed by RMIC.

Structure: *Staffing*—The president, secretary, part-time treasurer. *Advisory Board*—Twelve-member board of directors. *Funding*—Approximately $1 million in private capital from corporate supporters. The company generates income from its asset base to cover all expenses. *Program Evaluation*—Money invested, businesses helped, development of prominent minority business leaders in the local and regional community.

Future Plans: Continue improving the minority business community.

Advice: Contact RMIC's management.

Contact: Oscar Figueroa, President of RMIC, 201/648-5627

New York

Biotechnology Transfer Project
Cornell University

Description: *Goals*—To foster technology transfer from the university to small biotechnology companies. To aid in technology-related economic development. *Activities*—Provides information on university technologies and resources to small businesses. Informs scientists of state and federal funding sources for commercial research. Assists companies with business plans, SBIR grants, and marketing information. Visits companies to establish contacts for developing a statewide network of biotech companies. *Audience*—Small New York State biotechnology companies. *Innovations*—The provider of information is trained in both science and business and has worked in academe and business. Emphasis is on the extension associate's personal visits to companies.

Structure: *Staffing*—Single extension associate. *Advisory Board*—Six members. *Funding*—New York State Science and Technology Foundation. *Program Evaluation*—In the process of sending out a questionnaire for evaluating the program.

Products: *Publications*—Article, "The Impact of Biotechnology," in *New England Farmer*.

Future Plans: Concentrate on helping to raise more funds and establish more relationships with venture capitalists.

Advice: Acquire broadly trained people for this type of activity. It is a significant benefit to have someone who has worked in both industry and academe.

Contact: Mary Lee Noden, Senior Extension Associate, 607/255-4665

Industrial Innovation Extension Service
Cornell University

Description: *Goals*—To assist small- to medium-sized companies in New York State in improving productivity and profitability, by making available to them technologies developed in Cornell's college of engineering. *Activities*—This is one of four pilot programs in industrial extension being sponsored by the New York State Science and Technology Foundation. It has been in operation since March 1987 and has over twenty-five active clients who are helped through a variety of means, including direct consulting by engineering extension specialists, master of engineering student projects, and training seminars. *Audience*—Manufacturing firms in the ten counties surrounding Cornell University. *Innovations*—This program utilizes a successful delivery system that has been developed by Cooperative Extension over the past seventy-six years.

Structure: *Staffing*—Extension specialist/program manager (field work), extension specialist (field work), project leader (liaison between field and college faculty/students, half-time), secretary (half-time). *Advisory Board*—Five members. *Funding*—Jointly by the New York State Science and Technology Foundation, the college of engineering, and cooperative extension at Cornell. The only income is in the form of modest fees companies pay when involved in student projects. These fees essentially cover expenses associated with the projects. *Program Evaluation*—Verifiable improvements in productivity on the part of client firms, retention/creation of jobs, transferred technology.

Future Plans: Increase the extent of coverage in the ten counties in the Southern Tier. Expand the program to include more fully SUNY Binghamton and regional community colleges.

Advice: Hire qualified staff. Don't overextend in the early stages: promises of service made but not kept can hinder the program's acceptance.

Contact: Charles P. Yohn, Director, Corporate Relations, 607/255-6093

Northern Advanced Technology Corporation
State University College at Potsdam

Description: *Goals*—To develop a research and development high tech park. *Activities*—First building now opening. *Audience*—High-tech faculty and students at local colleges with technology transfer ideas. *Innovations*—Rather than trying to attract businesses into the area, NATC is helping local faculty and students in engineering and computer science to develop a business based on their ideas to keep them in the area.

Structure: *Staffing*—Executive director, executive secretary. *Advisory Board*—Five members. *Funding*—New York State Science and Technology Foundation, federal agencies such as HUD, and local colleges and government agencies. No income yet, but when generated, will be used to pay staff and pay off loans. *Program Evaluation*—Number of businesses in the park and number of employees.

Products: *Publications*—"A New Environment for New Technologies."

Future Plans: Construct up to four buildings. Locate a start-up incubator on campus. Offer services to small businesses in the region. Develop a manufacturing facility.

Advice: Visit existing operations and learn from their successes and failures. Seek broad local support from community, county IDA, etc.

Contact: Dr. John Marshall, Vice President, Institutional Advancement, 315/267-2190

North Carolina

Agricultural Extension Programs
North Carolina A&T State University

Description: *Goals*—To assist farmers with limited resources to increase income. To help nontraditional extension audiences participate in economic development activities. *Activities*—Works with various groups to address land loss and economic development issues. Actively searches for alternative agricultural opportunities and ways to improve profitability. The Farm Opportunities Program provides management assistance on a structural one-on-one basis for small farms. Offers direct market training (mobile units) at a food fair to link small farmers with low-income consumers. *Audience*—Minority populations, small and limited resource populations, nontraditional extension audiences. *Innovations*—Integrated family improvement programming. Offers 4-H programs fostering leadership among youth and teens.

Structure: *Staffing*—Two administrators, three program coordinators, seven extension specialists, thirteen extension agents, twenty-three paraprofessionals. *Advisory Board*—1980 Extension Program Advisory Committee. County Small Farm advisory committees. *Funding*—USDA Extension funds (82 percent), NC funds (2 percent), county funds (13 percent), private nontaxable funds (3 percent). *Program Evaluation*—Accomplishment reports, impact studies, annual reports, county reports.

Products: *Publications—Small Farm Newsletter, Dimensions,* various extension bulletins.

Future Plans: Demonstrate alternative economic opportunities. Integrate multidisciplinary approaches.

Contact: Dr. Dalton H. McAfee, Acting Associate Dean and Administrator, 919/334-7691

Transportation Institute
North Carolina A & T State University

Description: *Goals*—To conduct research, provide technical training and assistance, undertake public-service projects, and administer other programs in transportation. *Activities*—Provides expertise in small city and rural transportation, paratransit, transit financing, transit productivity, and transportation problems of the elderly, handicapped, and low-income citizens. Conducts research in transportation energy contingency planning, motor freight, regulatory analysis, and privatization in the transportation field. Awards research assistantships to students for work on current research topics, enabling them to gain practical experience while completing their degrees. Assists students in securing employment in the private and public sectors. Faculty within the school of business and economics, and other schools in the university, have an opportunity to enhance classroom instruction by gaining expertise in current transportation research. *Audience*—Faculty, staff, and students, citizens in the region. *Innovations*—An integral part of the education of transportation students comes from involvement in the transportation research programs. Student assistants work closely with faculty members and make important contributions to the projects. Financial awards made to the transportation students come from federal research contracts and also from private companies and foundations. One foundation has also established an endowment for the university that supports a UPS Transportation Chair.

Structure: *Staffing*—Director, administrative officer, institute secretary, twelve research associates (faculty), student research assistants. *Funding*—Federal, state, and private funding, sources include the Urban Mass Transportation Administration, the Office of the Secretary of the U.S. Department of Transportation, the North Carolina Department of Transportation, Sea Land Services, Inc., United Parcel Services, Inc., and Barton-Aschman Associates. *Program Evaluation*—Measurable objectives, appropriateness of results, approval by funding agency of reports and research findings, time relevance and appropriateness, repeat funding.

Products: *Publications*—Many.

Future Plans: Maintain and enhance quality of service. Continue job training, develop internship opportunities for students, and develop opportunities for transportation faculty. Provide additional sources of funding for student scholarships. Acquire needed materials for expansion of present library resources. Increase the number of contracts for internship opportunities and related student experiences. Seek funding opportunities not only for continued faculty development but also for expanded workshop opportunities, particularly at land-grant institutions. Cite achievements of researchers in support of additional and new sources of funding necessary to maintain the present level of operation, in light of dwindling federal resources. Acquire university allocation of funds to support communications and other operational needs.

Advice: Have measurable objectives, a reasonable work plan, and goals appropriate within framework of research technology. Qualifications and capabilities of researchers should be commensurate with desired outcomes.

Contact: Dr. L. Milton Glisson, Director, 919/334-7745

Ohio

Center for Labor-Management Cooperation

Wright State University

Description: *Goals*—To create a better understanding of the role of labor-management cooperation in producing a healthy and stable economy. To facilitate the design and implementation of labor-management cooperation. *Activities*—Provides assistance in establishing the essential preliminary dialogue between labor and management. Helps form joint labor management committees. Initiates newspaper articles, editorials, and television interviews on labor-management cooperation. Provides staff and board members to speak at community-professional meetings. Provides information on the results of surveys and programs conducted by the center. Publishes a newsletter to highlight cooperative techniques, resources available, and economic indicators. Conducts a regional meeting to present center programs and information on cooperative techniques. Produces videotapes on benefits offered by the center and how it functions. Assists in identifying specific problems of importance in the given setting. Helps labor and management design appropriate cooperative plans for a given setting. Provides training in suitable locations. Provides assistance in implementing plans designed by the labor/management group. Provides information on cooperative plans, their strengths and weaknesses, and techniques for implementing such plans. *Audience*—Labor union members and managers in the private sector.

Structure: *Staffing*—Director, secretary. *Advisory Board*—Eight members, three management, three labor, and two university. *Funding*—State of Ohio. Center does not generate income. *Program Evaluation*—An outcomes measure has not been developed. The criterion for success is continued funding from the state.

Contact: Janet C. Goulet, Director, 513/224-0991

Southwest Center for Advancement of Labor/Management Corporation
Wright State University

Description: *Goals*—To enhance labor-management cooperation as a common mode of practice and thereby ensure that jobs currently existing in Ohio are maintained and more jobs for the future are created by the attracting of new industries to Ohio. To create a better understanding on the part of the public of the role labor-management cooperation has in producing a productive and stable economy. To provide assistance to labor and management, as requested, in designing and implementing labor-management cooperation plans. *Activities*—Maintains a significant mailing list. Has published a brochure announcing services. Has aided the Clark County Labor-Management Committee in initiating a membership drive and a search for an executive director. Has installed a computer system to allow the maintenance of data bases and set up a permanent facility. Now developing a communication program for in-plant training, serving as a coordinator between the labor-management committee of the chamber of commerce and the existing Dayton Council for Labor-Management, producing a newsletter on labor-management activities, and conducting a labor-management conference. *Audience*—Primarily industry and labor, other groups interested in labor-management cooperation, including chambers of commerce. *Innovations*—The research of the center will be highly applied and task oriented, not academic in the historical sense. It is anticipated, in time, that the fruits of the center will be reflected in various aspects of the curriculum, particularly those of the college of business and administration.

Structure: *Staffing*—Director, assistant director, secretary, students. *Advisory Board*—Fourteen-member board of directors (six labor, six management, and two academe). *Funding*—Ohio Department of Development, Wright State. *Program Evaluation*—Critique of constituencies, ability of the center to garner fiscal support from the state and from various sectors of the economy.

Products: *Publications*—Brochure. *Awards and Recognition*—The center received a competitively awarded grant from the Department of Development of the State of Ohio for 1987-88.

Future Plans: Develop a speakers and consultants list to facilitate response to requested needs. Take the lead in establishing local chapters of the Industrial Relations Research Association and the Society for Professionals in Dispute Resolution. Consider developing materials on labor-management cooperation for teachers and students at the middle-school level and above.

Advice: When establishing a professional, multidisciplinary center addressing labor-management problems, cultivate an understanding of the historical tensions in this arena, and realize that the research to be undertaken needs to be less academic in the traditional sense and much more practical and response oriented.

Contact: Dr. Janet Goulet, Director, 513/224-8591

The Edison Materials Technology Center (EMTEC)
Wright State University

Description: *Goals*—To identify or develop technology and provide services related to materials and materials processing. To keep Ohio industry competitive in national and world markets by developing and/or transferring the above-mentioned technologies to industry. *Activities*—Under the Thomas Edison program of Ohio, EMTEC is a growing consortium of fifteen industry members, eight area academic institutions, five federal laboratories, and numerous civic organizations that plan and conduct research and provide services based on industry-defined needs. EMTEC conducts marketing projects, services projects, core technology developments, and numerous special projects that address individual member needs. The two marketing projects are to build EMTEC membership in Ohio and in the nation. The three services projects address transfer of developed technology to industry members. The five core technology projects address quality control of source and processed materials, porosity in castings, near net shape forming, surface finishing, and low-cost materials substitutions. Several special or proprietary projects, based on near-term needs unique to a single member, have also been initiated. *Audience*—Industry members. *Innovations*—EMTEC is a not-for-profit, tax-exempt corporation in the State of Ohio, that attempts to integrate the total resources available through its members and to apply these resources in a way that removes technological impediments encountered by industry. All activities in EMTEC are constructed as projects, with a defined objective, technical and management approach, identification of resources required, cost schedule, and project deliverables.

Structure: *Staffing*—Director, executive secretary, and projects managers for marketing, services, and technology projects. *Advisory Board*—Twenty-two member Board of Governors from industry, academic institutions, and federal agencies. *Funding*—Grant-matching funds from the State of Ohio for each dollar of qualifying income. Such income includes four levels of annual industry member dues. In-kind contributions of equipment, software, and other assets may be counted to obtain grant-matching funds from the State of Ohio. These funds are used to finance the marketing, services, and core technology projects previously mentioned. The funds may not be used to support special or proprietary projects, which are funded totally by the member who requests the work. *Program Evaluation*—All projects conducted by EMTEC are reported and evaluated quarterly. The criteria for success are defined in the individual projects; ie, for marketing projects, the new membership goal and timeline are defined; for technical projects, specific deliverables such as technical reports, test data, successful technology demonstrations, etc., are defined in the project descriptions.

Products: *Publications*—Technical reports on each technology project are standard deliverables. Monthly progress reports. Quarterly newletter being developed.

Future Plans: Double industry membership in the next fiscal year. Develop new projects in superconductivity materials, highly permeable magnets, real-time coating process control, and others suggested by industry members. Expand services to small business. Plan symposia and media events.

Advice: People are the key. Assemble the strongest possible team in capabilities with a zealot's desire to succeed.

Contact: Dr. Frank Moore, Director, 513/259-1366

Oregon

Geo-Heat Center
Oregon Institute of Technology

Description: *Goals*—To undertake research in the utilization of geothermal heat, particularly in space heating. To provide technology transfer and technical assistance throughout the world. *Activities*—Undertakes research projects from the government, state and local agencies and governments, foreign nations, and others. Publishes a quarterly newletter, GHC Quarterly Bulletin, with a mailing list throughout the United States and forty-five foreign countries. Has hosted over 1,200 visitors from the United States and foreign countries and has had adjunct professors from Iceland, New Zealand, Japan, the People's Republic of China, and the Philippines. *Audience*—Governments and individuals involved in geothermal heat.

Structure: *Staffing*—Director, two research engineers, two secretarial/clerical staff. *Funding*—U.S. government, state and foreign governments, industries, and other agencies.

Contact: Paul Lienau, Director, 503/882-3583

Texas

Institute for Innovation and Design in Engineering
Texas A & M University,
Texas Engineering Experiment Station

Description: *Goals*—To strengthen the contribution of the engineering sciences and other innovation and design-related disciplines toward the improvement of manufacturing competitiveness. *Activities*—In addition to a broad research program, activities include curriculum development, strong interaction and cooperation with industry, and an incubator program to provide assistance to technology-based start-up companies. *Audience*—The manufacturing sector. *Innovations*—Two industrially funded R&D programs are planned for operation: The Research Consortium and the Innovation Consortium. Plans underway to establish the New Venture Incubator.

Structure: *Staffing*—Director. Faculty members also participating. *Funding*—College of engineering private funding and research contracts. *Program Evaluation*—Contributions to education and teaching, research contracts, and start-up businesses assisted.

Future Plans: Continue current program development.

Contact: David G. Jansson, Director, 409/845-5024

Technology Business Development (TBD) Division
Texas A & M University
Texas Engineering Experiment Station

Description: *Goals*—To become a focal point for the stimulation of the state's technology base. By leveraging federal, state, and private resources through cooperative activity, to facilitate and encourage technology transfer and the formation of technology-based businesses in Texas. *Activities*—TBD has instituted three complementary programs: Commercialization of University Research, technical assistance to small businesses (INVENT program), Economic Development Communications Program (including the Texas Innovation Information Network System), and NASA Industrial Applications Center Program (planned). *Audience*—Entrepreneurs, small-and medium-sized technology-based businesses. *Innovations*—TBD is establishing a statewide network of Technical Assistance Centers to be operated in conjunction with the state's four Small Business Development Centers (SBDCs). TBD has entered into a cooperative agreement with the Center for Technology Development and Transfer of the University of Texas at Austin to facilitate university research commercialization.

Structure: *Staffing*—Director, associate director, assistant director for economic development programs, manager of Austin regional office, manager of Houston regional office, advanced technology specialist, research associate, senior secretary, secretary, accountant, student interns. *Funding*—General revenue funds, State of Texas; Special Initiative funds from Texas Engineering Experiment Station; SBDC program, Small Business Administration. *Program Evaluation*—Degree of cooperation and participation by other state and federal economic development groups; number and quality of technical assistance projects; number and quality of technology transfer and commercialization projects; participant evaluation of workshops and conferences; and reader evaluations of newsletter.

Products: *Publications*—"Competition and Cooperation in the U.S.-Japan High Technology Relationship." "Strengthening Regional Manufacturing: Investigating Cooperative Solutions." *Diversification*, quarterly newsletter.

Future Plans: Continue to develop and strengthen TBD's three program areas.

Advice: Develop a network of creative colleagues. Expect to work hard. Don't lose your sense of humor.

Contact: Dr. Helen Baca Dorsey, Director, 409/845-0538

Category C

Specific Services for a Specific Audience

Programs providing one kind of economic development assistance (such as information dissemination, technology transfer, applied research). The audience or recipient of the service is also limited by type and industry or by sector of the population—for example, an incubator for a specific product, a biomedical research linkage with one or two companies, a training program for displaced workers.

Alabama

Auburn U. Econometric Model
Auburn University at Montgomery

Description: *Goals*—To provide timely forecasts of state economic activity for state and local governments and the business community. *Activities*—Constructs annual and quarterly econometric models of the state's economy. Performs ongoing maintenance and restructuring of these models. Activities include data collection and compilation, estimation of appropriate equations and equation form, construction of the model, and testing the models for accuracy. Revisions and restructuring are done as weaknesses are found or new and better methods are discovered. *Audience*—Business community and state and local governments.

Structure: *Staffing*—Econometric consultant, project specialist. *Funding*—State government. *Program Evaluation*—Testing of forecast results over past years and testing actual results against reality as it takes place. Error in any sector of more than 5 percent is a signal that the models are not up to standard and they are restructured until the error terms are less than 5 percent (usually lower).

Future Plans: Expand the annual model to include more in-depth analysis and forecasting capability in the financial and energy sectors. Construct an alternative scenario capable revenue model.

Contact: Dr. John G. Veres, Director, 205/244-9700

Arizona

Center for Business Research
Arizona State University

Description: *Goals*—To provide current information and research on the business activities and economics of Arizona and metropolitan Phoenix. *Activities*—Provides Arizona citizens with a wide variety of business indicators, including the Arizona Gross State Product, a quarterly measure of the value of output by each sector of the Arizona economy; and the metropolitan Phoenix Consumer Price Index, a widely referenced measure of inflation in the Phoenix area. Research findings are shared with the public through project reports, news releases, and a monthly newsletter. The center is also an official depository of census tapes on Arizona and the nation. *Audience*—The community, businesses, banks, government agencies.

Structure: *Staffing*—Director, two programmers, 3-5 graduate students, two economists, editor, three support staff. *Funding*—Private funds donated for specific projects. *Program Evaluation*—Does the unit have an interdisciplinary thrust and successfully promote cooperation among faculty and graduate students from different academic units? Is the unit able to attract outside funds to support its activities or have strong support from outside the university? Is the unit advancing knowledge or performing a valuable service in a manner that would be unlikely to occur at the university if the unit did not exist?

Products: *Publications*—*Arizona Business* (newsletter).

Future Plans: Conduct studies of the economic impact of new types of businesses. Continue to perform demographic studies of the state's population and migratory trends.

Contact: Dr. Timothy Hogan, Director, 602/965-3961

College of Engineering and Applied Sciences Engineering Excellence Program
Arizona State University

Description: *Goals*—To place ASU among the leading universities in the nation in providing graduate engineers and research in those areas of interest to American industry. To review the mission of the school of engineering in an effort to launch a sustained pursuit of quality, innovation, and excellence. *Activities*—Offers services in solid state electronics, automated manufacturing, and computer-aided processes. Provides continuing education and engages in joint research projects. Operates four research centers: Center for Advanced Research in Transportation, Center for Solid State Electronics, Center for Energy Systems Research, and Center for Computer-Integrated Manufacturing Systems Research. Two additional areas of specialization are thermosciences, and computers and computer science. Enlists the expertise of other departments in economic development. Now establishing the Center for Science and Engineering Technology. *Audience*—Students, faculty, others interested in role of engineering in economic development. *Innovations*—The Center for Solid State Electronics includes a class 100 cleanroom, an MBE, a Convex XP2 mainframe computer, 3 SEMs, a MOCVD, and other state-of-the-art equipment and characterization facilities. The Center for Computer-Integrated Manufacturing Systems Research includes a CAD/CAM Lab, which houses an extensive collection of IBM equipment used for computer-aided design and research. The Telecommunications Research Center includes an anechoic chamber that is instrumented with a single-reflector compact range with a "quiet" zone and HP8510 network analyzer. The chamber and the instrumentation will be used both to make measurements of radar-cross section and antenna patterns and to create subsequent images. The Energy Systems Research Center includes a solar platform on the roof of the Engineering Research Center. This platform serves as a research laboratory for photovoltaic and solar applications, including a prototype open-cycle absorption solar cooling system, concentrators for evaluating solar cells under high concentrations of up to 1,200 suns, an 8 kw photavoltaic power system, solar domestic hot water system test facility, plasma-enhanced chemical vapor deposition reactor for preparing amorphous semiconductor alloys, and miscellaneous other equipment for conducting energy-related research. The Engineering Computer Services Center maintains thirteen mainframes and twenty-five other minis in support of the college's research and instructional efforts.

Structure: *Staffing*—Each center has a director and support staff, composed of secretarial/clerical support and research analysts. All faculty of the college have academic appointments but can elect to be affiliated with one or more of the centers. *Advisory Board*—Fifty-four member Engineering Advisory Council of industry leaders from the Phoenix area and faculty members from the college of engineering and applied sciences. Each research center has a task force. *Funding*—Each center has a line-item budget approved by the State of Arizona, which includes funds for personnel and general operations. Additional support is obtained through industrial affiliates programs, industrial fellows programs, gifts, and research projects. *Program Evaluation*—Each research center is evaluated continually by the applicable task force. Near the end of Phase I of the program the advisory council and ASU's president called for an independent review by outside reviewers, which included on-campus tours and interviews, and an off-campus debriefing. In addition, the university has a Sunset Review policy, which requires an extensive evaluation every five years for all organized research and service units to determine whether there is a continuing need for the unit in its present form or whether conditions should be assigned to its further existence.

Contact: Charles E. Backus, Assistant Dean for Research, 602/965-1725

Conference on East Asian Investment in Arizona's Future

Arizona State University

Description: *Goals*—To sensitize the metropolitan Phoenix business community and local and state officials to the impact of East Asian (particularly Japanese) investment and management style on the people of Arizona who are potential workers, managers, and colleagues of Japanese business people in Arizona. To highlight value differences and similarities cross-culturally at the work place and in the community, important concerns for Arizona's economic development. *Activities*—1 1/2 day conference, "East Asian Investment in Arizona's Future" will feature panel presentations by nationally known specialists from ASU, the Phoenix business and labor communities, and major academic institutions in the United States on East Asian literature, history, politics, sociology, anthropology, economics, and business. Four panels are planned on "Problems of Gender Discrimination in Japanese Business," "Japanese Investments in Arizona: Employee Adjustments to New Management Styles," "The U.S Community as Viewed by Japanese Business," and "China and the Potential for Hong Kong Flight Capital to the United States." *Audience*—"East Asian Investment in Arizona's Future" is directed to the metropolitan Phoenix business community and state and local officials, including members of the Valley Chambers of Commerce and the Phoenix Committee on Foreign Relations. *Innovations*—"East Asian Investment in Arizona's Future" will look at Japanese business in Arizona through a humanities perspective.

Structure: *Funding*—Arizona Humanities Council. *Program Evaluation*—Audience response to the conference will be assessed through a written questionnaire designed to obtain information on preconference versus postconference knowledge about: (1) East Asian investment in the United States and Arizona; (2) awareness of intercultural issues in the establishment of East Asian-owned businesses in the U.S.A. and Arizona communities; (3) labor management and business community relations growing from East Asian investment in Arizona and the United States; and (4) the growing internationalization of American business and society.

Contact: Dr. Sheldon W. Simon, Director, Center for Asian Studies, 602/965-7184

Economic Outlook Center
Arizona State University

Description: *Goals*—To use the powerful consensus forecasting method to compile current economic projections and sponsor conferences and seminars for the business community on business conditions and economic activities. *Activities*—Publishes two monthly newsletters. Presents a series of breakfast meetings at which leading national economists give current economic forecasts. *Audience*—Business community and government officials.

Structure: *Staffing*—Director, economists, administrative assistant. *Advisory Board*—Twelve members. *Funding*—State funding, with help from subscriptions to services offered by the center. Private funding being solicited. *Program Evaluation*--Does the unit have an interdisciplinary thrust and successfully promote cooperation among faculty and graduate students from different academic units? Is the unit able to attract outside funds to support its activities or have strong support from outside the university? Is the unit advancing knowledge or performing a valuable service in a manner that would be unlikely to occur at the university if the unit did not exist.

Products: *Publications*—Newsletters: Arizona Blue Chip Economic Forecast, Western Blue Chip Economic Forecast.

Future Plans: Continue to sponsor programs and publish the forecasting newletters.

Contact: Dr. Lee R. McPheters, Director, 602/965-5543

Arizona Hospitality Research and Resource Center
Northern Arizona University

Description: *Goals*—To provide research support to students in the School of Hotel and Restaurant Management and the hospitality industry in Arizona. *Activities*—Publishes a quarterly information item called *Arizona Hospitality Trends.* Develops a comprehensive inventory of the state's hospitality resources. Creates a resource library on the the hospitality industry for use by NAU students. *Audience*—Students in the Hotel and Restaurant Management School, hospitality industry in Arizona. *Innovations—Arizona Hospitality Trends.*

Structure: *Staffing*—Associate director, secretary. *Advisory Board*—Reports to the dean of the School of Hotel and Restaurant Management. *Funding*—State.

Future Plans: Conduct contract research with the hospitality industry.

Contact: Dr. Robert S. Byars, Associate Director, 602/523-2845

Arkansas

Applied Microbiology Training
Arkansas Tech University

Description: *Goals*—To provide training in basic microbiological techniques for technicians and quality control workers in food-processing industries in Arkansas. *Activities*—Course describes basic techniques in laboratory and theory behind their application to evaluate quality and safety of meat, milk, water, etc. Involves approximately 50 percent each in lecture and laboratory work; some topics included are microscopy, aseptic techniques, selective and differential media, immunoassays, disinfectant and antibiotic resistance, etc. *Audience*—Quality control and other technical personnel involved in microbiological evaluation of food and water, especially poultry. *Innovations*—Features strong reinforcement of theoretical concepts by laboratory experiences. All participants report significant learning by performing the techniques.

Structure: *Staffing*—Program director, laboratory technician. *Funding*—State funds, student enrollment fees, departmental budget, equipment purchased for the workshop and donated to the university by participants. *Program Evaluation*—Questionnaires filled out by participants at the conclusion of the workshop. Topics for workshop solicited from supervisory personnel and prospective participants. Critical comments invited from supervisors, even though they may not personally attend. If the attendees, their supervisors, and their home-office managers express satisfaction, the workshop is considered to be successful.

Future Plans: Continue to offer updated training to meet the needs of food-processing companies. Evaluate the needs for more specific training in water evaluation, and possibly expand into that area.

Advice: Build bridges to upper management. (Technical personnel have no authority to make meaningful decisions; midlevel managers take a short-term view of the training and are reluctant to spend money for anything other than training that is specifically applicable to each worker, despite the fact that technicians need to know some general theory and the senior technical staff will fully advocate such training.) Don't sell your training for less than it's worth. (This won't be appreciated and a lack of funds will hamstring program development.) Emphasize quality in the program.

Contact: Dr. Richard Cohoon, Acting Dean, School of Physical and Life Sciences, 501/968-0498

Fisheries Study Dardanelle Reservoir

Arkansas Tech University

Description: *Goals*—To determine the overall biological effect, if any, of Arkansas Nuclear One on Dardanelle Reservoir and the surrounding environment. To train and equip students with specialized skills in aquatic research. *Activities*—Baseline data pertaining to physical water quality, fish, and their aquatic environment in Dardanelle Reservoir are collected through use of a YSI meter, gill and trammel nets, meter nets, and rotenone. Data are tabulated and entered into a computer program. Annually the data are assembled into a report that is reviewed and analyzed by the technical staff of Arkansas Power and Light Company. *Audience*—Technical Services Department, Arkansas Power and Light Company. ATU students majoring in fisheries and wildlife. *Innovations*—The program is typical of those carried out in many regions of the United States to determine the environmental impact of fossil fuel or nuclear power plants on the local environment.

Structure: *Staffing*—One principal investigator, two part-time student research assistants. *Advisory Board*—Three technical services staff members of Arkansas Power and Light Company. *Funding*—Cost sharing with Arkansas Power and Light Company. *Program Evaluation*—Data are reviewed to determine any adverse effects on the ecological balance of Dardanelle Reservoir as a result of the operation of Arkansas Nuclear One.

Future Plans: Continue the collection and evaluation of data on Dardanelle Reservoir.

Contact: Dr. Richard Cohoon, Acting Dean, Physical and Life Sciences, 501/968-0498

Physical, Chemical and Biological Analysis Laboratory

Arkansas Tech University

Description: *Goals*—To provide environmental testing, i.e., physical, chemical, and biological parameters including proximate and trace element coal analyses, to small mining concerns financially unable to maintain a staff with such expertise. These mining concerns primarily have been coal oriented. *Activities*—Conducts water, soil, or vegetation analyses for coal companies, out-of-state construction companies, and the Division of Mining and Reclamation of the Department of Pollution Control and Ecology. *Audience*—Any organization involved in the prospective or active mining of Arkansas mineral resources. *Innovations*—The principal advantage of the program is the speed with which the requested service can be completed, thereby saving the mining concern time and money.

Structure: *Staffing*—Geological engineer, ecologist, geologist/clay mineralogist. *Advisory Board*—Five members, from state government and the mining industry. *Funding*—From the small charge to the industry for services provided and from the general operating budget of the institute. *Program Evaluation*—Number of mining concerns served, number of services provided.

Future Plans: Continue to provide basic analytical services at low cost to small mining concerns. Develop a capability of doing complete overburden analyses. Expand the coal analyses capabilities to include ultimate analyses.

Contact: Dr. Henry Barwood, Director, 501/968-0201

Arkansas Biotechnology Center
University of Arkansas at Fayetteville

Description: *Goals*—To continue to develop the biotechnical services offered to both public and private-sector scientists by the Arkansas Biotechnology Center. *Activities*—Offers custom services in monoclonal antibody production and custom fermentation services with emphasis on biomass conversion. *Audience*—Public and private-sector scientists needing the services. *Innovations*—Ease of availability of the services.

Structure: *Staffing*—Coordinator, director of the Hybridoma Laboratory, technicians for the Hybridoma Laboratory, director of the Biomass Laboratory, senior technician for biomass, secretary. *Advisory Board*—Four members. *Funding*--University of Arkansas, Arkansas Department of Higher Education, and Pel-Freeze, Inc. of Rogers, Arkansas. Fees charged for specific services. *Program Evaluation*—Self-sufficiency.

Future Plans: Stabilize the existing offerings while evaluating new services to be added.

Advice: Make sure of the commitment of your university scientists to such a program.

Contact: Collis R. Geren, Coordinator, 501/575-4648

Federal Highway Administration Technology Transfer Center
University of Arkansas at Pine Bluff

Description: *Goals*—To translate into understandable terms the latest state-of-the-art technologies in the areas of roads, bridges, and public transportation, for local and county highway and transportation personnel. *Activities*—Enhancement of the transfer of technology to local agencies through workshops, seminars, and short courses, and an information resource center on the campus of UAPB and UAF. Assists in the improvement of communication of technical transportation issues between the Federal Highway Administration, State Highway Transportation Agencies, local agencies, and universities. Encourages the implementation of effective procedures and technology at the local level. Synthesizes experience of the selected participants to serve as role models that could be used not only in Arkansas but other states. *Audience*—Local transportation agencies, county judges, city mayors, street supervisors, general highway maintenance personnel. *Innovations*—The Transfer Technology Program is one of the most beneficial aspects of the Federal Highway Administration partnership with universities. It allows a hands-on, up-close look at problems relating to the everyday highway delivery arteries and capabilities by Arkansas counties, while at the same time allowing university personnel to become involved in helping local transportation agencies find solutions to the many problems associated with highway maintenance.

Structure: *Staffing*—Project director, codirector, technical coordinator/retired civil engineer, editorial assistant. *Advisory Board*—Twelve members. *Funding*—This project was funded by the Federal Highway Administration from June 1985-December 31, 1985 for $187,500 and refunded by the Federal Highway Administration and the University of Arkansas at Pine Bluff and Fayetteville from January 1, 1987-December 31, 1987 for $125,000; used by the State of Arkansas through liberal assistance by the university to local transportation agencies; normally, several hundred thousand dollars of income generated. *Program Evaluation*—Evaluated yearly during the final month of funding cycle. Outcome measures of actual delivery of workshops, seminars, and other informational clearinghouse activities that provided information to more than 90 percent of all counties in Arkansas, involving approximately 900 individuals including members of the state legislature.

Products: *Publications*—A quarterly newsletter, listing all new innovations and technological developments in highway maintenance, bridge repair, management techniques, and resource utilization. *Awards and Recognition*—(1986) Center voted as having the best reporting system over all of the T-2 centers in the country.

Future Plans: Operate on a continuous and uninterrupted basis for an indefinite period pending funding by the Federal Highway Administration. (Center has been assured funding through December 31, 1988.)

Advice: Make sure that all guidelines and operating procedures are consistent with those of your university, especially if another state agency is involved in the overall operation of the project.

Contact: Dr. Thomas Knight, Chair, Social and Behavioral Sciences, 501/541-6787

California

Continuing Maritime Education
California Maritime Academy

Description: *Goals*—To provide expert advice and assistance in resolving almost any maritime training requirement. To design and implement special education and training programs for the U.S. Merchant Marine and maritime industry, including U.S. offshore industry. *Activities*—Conducts projects involving vessel traffic analysis, tanker operation, marine casualties, and incidents. Develops, researches, and presents data, develops analysis, presents conclusion. *Audience*—Companies in the U.S. maritime industry. *Innovations*—CME has available many experienced, knowledgeable specialists in maritime affairs who remain current through active employment in their specific fields.

Structure: *Staffing*—Director, assistant director, secretary, office assistant, and 3-5 temporary consultant assistants. *Advisory Board*—Maritime Advisory Committee of 10-15 members, each from an aspect of industry. *Funding*—CME is a cost reimbursable center. *Program Evaluation*—Some annual self-analysis comparing numbers of students, gross income, and costs of doing business. Recurring business and industry feedback provides concurrence.

Products: *Publications*—Lesson plans and course outlines.

Future Plans: Continue as in past but attempt to enter graduate-level academic work and become more involved in social, economic, political, and technical research.

Contact: John G. Denham, Director, 707/648-4162

Orange County Annual Survey
University of California, Irvine

Description: *Goals*—To provide private and public sector decision makers with valid and current information on Orange County residents. To track, in a survey, shifts in important attitudes and population characteristics. To examine economic, social, and political issues of Orange County from a nonadvocacy position. To contribute to public discussion and enlightened debate on public policy. *Activities*—Annual survey effort occurs in late summer/early autumn. Press releases and presentation of survey results to subscribers and sponsors done in December, and articles and academic papers are written throughout January-August. *Audience*—Corporate, foundation, and government agency policy makers; the media. *Innovations*—Funded by subscription. Developing a longitudinal data base on Orange County demographics and public opinion on policy issues.

Structure: *Staffing*—Study director, research associate. *Advisory Board*—Thirteen member advisory board, nineteen member steering committee. *Funding*—Subscription and sponsorship. *Program Evaluation*—Outcomes include pieces in regional and national newspapers (both news items and op-ed pieces), and interviews on regional news commentary television shows.

Products: *Publications*—Orange County annual survey final reports, and academic journal and popular press articles.

Future Plans: Continue using the same model, building on the data base and focusing on current policy issues within Orange County.

Contact: Dr. Mark Baldassare, 714/856-7116

Orange County Business and Economic Studies (OCBES)
University of California, Irvine

Description: *Goals*—To conduct an ongoing series of annual surveys and analyses focusing on Orange County, CA, including the Orange County Executive Survey, the Orange County Employment Analysis, and a longitudinal study of the bioscience industry in Orange County. To provide useful economic and business information and forecasts on Orange County to local and state business and government leaders. *Activities*—Two studies have been in operation since 1986: the Orange County Executive Survey and the Orange County Employment Analysis. Survey and analysis work is completed in the fall and winter, and in early spring press releases and presentations of survey results are made. Presentations include early meetings with subscribers and sponsors, and then a conference open to the public. Throughout the remainder of the year, articles and academic papers are prepared, and development of the next summer conference on the management of bioscience firms for current and future managers is planned. *Audience*—Business executives, government planners, and others concerned with economic development in Orange County. *Innovations*—The OCBES studies utilize a combination of mathematical models and executives' own individual forecasts. The bioscience study focuses in part on bioscience firm managers' reasons for locating in Orange County.

Structure: *Staffing*—Studies director, four research assistants, one project assistant. *Advisory Board*—Seven advisory board members, six additional subscribers. *Funding*—By subscription, with two levels of participation. The bioscience study is funded in part by grant monies. Public conferences also generate participant fees. *Program Evaluation*—The executive forecasts can be measured by the accuracy of previous years' forecasts. Subscriber interest is a second important measure of the utility of the OCBES projects. Other outcomes include coverage by the media and participation in the public conferences.

Products: *Publications—Orange County Business and Economic Studies-A Preliminary Report. Orange County Business and Economic Studies-Annual Report.*

Future Plans: Continue the studies annually. Add other research and analysis efforts to broaden coverage of business and economic issues in Orange County.

Contact: Professor Jone Pearce, Studies Director, 714/856-5449

Florida

Florida Resources and Environmental Analysis Center
Florida State University

Description: *Activities*—Multidisciplinary research unit providing research to meet the needs of public agencies in Florida. Among the technical resources of the center are computer technology, cartography, graphics, air photo interpretation, and land identification and analysis. Offers professional research planning and design service to every level of government concerned with use of fiscal, physical, human, or economic resources.

Contact: Dr. Edward Fernald, 904/644-2007

Center for Research in Electro-Optics and Lasers
University of Central Florida

Description: *Goals*—To perform state-of-the-art research in electro-optics and lasers. To contribute to the college of arts and science and college of engineering graduate education programs. *Activities*—In collaboration with other institutions in the state system, developing an internationally recognized center of excellence located geographically in one of the nation's most concentrated areas for commercial electro-optics and laser research and development industries. Working closely with that industry in the development of an engineering and scientific knowledge base necessary to the continued development and maintenance of the competitive position of that industry in the national and international market place. Research projects include laser preparation, sensors, optical and image processing, nonlinear optics, scintillation and fluctuation phenomena, and diode pumping.

Contact: Dr. M. J. Soileau, Director, 305/275-5137

Florida Solar Energy Center (FSEC)
University of Central Florida

Description: *Goals*—To advance the research, development, and analysis of solar technology. *Activities*—Serves as the focal point of Florida's solar energy activities and is one of the nation's preeminent solar energy research and development organizations. Research orientation emphasizes four technology program areas: photovoltaics, low-energy building design, solar water heating, and advanced technologies. A comprehensive education and dissemination program transfers much of these research and development results throughout the state. The Center's Public Information Office distributes more than 120,000 publications annually in response to more than 18,000 requests for information. In addition, the FSEC's library is one of the nation's top alternative energy resource centers.

Contact: Linda Harris, Office of Public Affairs, Florida Board of Regents, 904/487-2061

Institute for Simulation and Training
University of Central Florida

Description: *Goals*—To provide organizational coordination for multidisciplinary research and graduate education in simulation and training. *Activities*—Because of proximity to Department of Defense establishments involved in the development of simulation training equipment and programs for the armed services, assumes a position of leadership in providing an engineering and scientific research base for the development and enhancement of state-of-the-art concepts in simulation and training. In collaboration with other institutions in the state system, works with the simulation and training industry on fundamental research in such areas as sensor simulation, visual display systems, simulator cues generation, computer simulation, electro-optics systems, instructional systems design, and human systems interfacing.

Contact: Dr. A. L. Medin, Director, 305/275-5247

Indiana

Vocational-Technical Services Center
Indiana State University

Description: *Goals*—To increase the involvement of university faculty in meeting the needs of corporate training staff within the state. *Activities*—Has just completed a number of responses to RFPs issued by the State of Indiana for services for industrial teachers in the public schools of the state. *Audience*—Industrial trainers, personnel development offices, and vocational staff development. *Innovations*—The use of contracted "third parties" for objective evaluation of projects appears to be a unique means of evaluating contract performance.

Structure: *Staffing*—Executive director, coordinator of projects, two secretaries, graduate assistant. *Advisory Board*—Twelve members, representing private and public sectors as well as business and labor. *Funding*--Indiana State University and cost recovery contracts and grants. *Program Evaluation*—Usually conducted by third-party evaluators under contract and made by clientele.

Products: *Awards and Recognition*—Citation Award, Indiana Vocational Association.

Future Plans: With newly purchased data-processing equipment, create a training-needs data base for program development.

Contact: Dr. S. R. Wiersteiner, Executive Director, 812/237-3750

Associate of Science in General Studies
Indiana University at Kokomo

Description: *Goals*—To provide access to higher education for employees desiring to upgrade skills and improve their level of education. *Activities*—Provides general education courses leading to an Associate of Science in General Studies. Courses are offered in-plant and are identical to those offered on campus. *Audience*—Employees of Chrysler Corporation's Transmissions Plant. *Innovations*—Education is in-plant.

Structure: *Staffing*—Faculty members in sufficient numbers to cover classes generating adequate minimum enrollments. *Advisory Board*—Individuals from Chrysler personnel department and university administration. *Funding*—Chrysler pays employee tuition and fees. *Program Evaluation*—

Normal course evaluations by students, reviewed by Chrysler personnel department and university officials.

Future Plans: Continue until participant interest wanes.

Advice: Consider such a program as a means of upgrading the local labor force.

Contact: Mr. Curtis Sanderson, Director of Continuing Studies, 317/453-2000

Directed Continuing Education Programs
Indiana University at Kokomo

Description: *Goals*—To provide programs for upgrading employee skills in selected subject areas. *Activities*—Offers nineteen courses, some taught inplant, others on campus. Programs are custom designed for employees of twelve separate corporations, programs delivered at selected sites within the institution's service area. Programs include executive development series, executive secretarial development series, women's executive development series, paralegal certificate program, small business seminars, and public administrator/elected official series. *Audience*—Corporate employees and other groups desiring to upgrade skills. *Innovations*—Inplant delivery where demand is sufficient, delivery in selected sites throughout the service area.

Structure: *Staffing*—Instructional personnel selected for particular professional skills and expertise, normal complement of continuing education personnel. *Advisory Board*—Advisory boards in each county in service area. *Funding*—Student fees, corporate sponsors. *Program Evaluation*—Student-employer evaluations at the end of the course. Criteria are general satisfaction with course content and appropriateness of instruction.

Future Plans: Continue programs as demand dictates. Generate new programs when demand becomes evident.

Advice: There is much need for these types of programs in the community.

Contact: Curtis Sanderson, Director, 317/453-2000

Workshop on Economic Development
Indiana University East

Description: *Goals*—To enhance economic literacy in East Central Indiana. To integrate economic concepts in school curricula, K-12. *Activities*—Conducts a workshop on economic development. *Audience*—Area teachers (elementary and secondary). *Innovations*—Through the Indiana University East's Center for Economic Education and the Indiana Council for Economic Education.

Structure: *Advisory Board*—Thirteen members. *Funding*—Local businesses, Indiana Council for Economic Education, and Indiana University East. *Program Evaluation*—Participants are pre- and post-tested on economic literacy and on economic attitudes and judgments and do evaluations. Participant feedback and performance in class projects. Interdisciplinary approach and cooperative arrangements between Indiana University and Purdue University.

Products: *Publications*—Participant curriculum units. Citations from Indiana Council for Economic Education, Joint Council on Economic Education, International Biographical Centre, Cambridge, England, and American Biographical Institute, and from mayor.

Future Plans: Contribute expertise in economic development. By working with school systems and local corporations. Enhance economic literacy.

Advice: Strive to tap institutional and local/regional resources and make field contacts.

Contact: Ashton I. Veramallay, Director, Center for Economic Education, 317/966-8261 x347

Laboratories for Environmental Research
Indiana University Northwest

Description: *Goals*—To carry out zinc, lead, and iron resource recovery in the basic steel industry of the area. To particulate control on roadways and storage of area steel mills. To perform hydrochloric acid recovery from "pickling liquors" at area steel mills. To conduct municipal solid wastes management and harbor sediment analysis. *Activities*—Area industries, governments, environmental groups, state and federal environmental and energy agencies. *Innovations*—The activities utilize faculty and students as researchers and are directed by a recently retired steel industry senior research scientist.

Structure: *Staffing*—Director, scientist, secretary, various faculty and students as needed. *Advisory Board*—An advisory board for industrial projects, consisting of area industry personnel in charge of environmental quality. *Funding*—The university, contracts and grants from government agencies and private-sector industries. *Program Evaluation*—Utilization of research results to solve area environmental concerns and direct economic growth through the creation of resource recovery businesses are the best criteria for success. However, reduction of environmental problems present an indirect economic benefit to area heavy industries.

Products: *Publications*—Reports to clients.

Future Plans: Address Northwest Indiana environmental concerns, focusing on regionalization of waste management including resource recovery. Continue to focus on centralized major industrial waste recovery and coordinated municipal wastes management.

Advice: Develop rapport with community interests. Promote mutual research efforts among faculty and area-based business and industry professionals. Promote university recognition/reward for faculty participation in these activities.

Contact: Dr. Michael O. Holwaty, Director, 219/980-6666

Kansas

Center for Basic and Applied Research
Wichita State University

Description: *Goals*—To provide an organizational structure for aviation research in aerodynamics, flight dynamics, propulsion, and advanced materials. To provide support for other centers within the Aviation Research Institute. *Activities*—Major contracts in progress for FAA and the Army Research office. Smaller contracts in various stages of completion for Boeing, Cessna, NASA Dryden Research Center, Fairchild, and others. *Audience*—Government agencies, industry. *Innovations*—The laboratories are unique to the region, and personnel are highly qualified.

Structure: *Staffing*—Two wind tunnel technical staff, one shop staff, eleven faculty associates. *Funding*—External grants and contracts. *Program Evaluation*—Publication of research results. Support of faculty, graduate students. Development and maintenance of research facilities and equipment.

Products: *Publications*—"Water Tunnel Studies of Vortex Flows and Vortex-Fin Interaction on the F/A-18 Aircraft." "Vortex-Fin Interaction on a Fighter Aircraft." *Awards and Recognition*—First Award in 1987 AIAA Regional Student Paper Competition.

Future Plans: Complete current major FAA and ARO contracts. Develop follow-up research to sustain the personnel and facilities of the center. Seek new sources of funding. Continue upgrading personnel skills and facilities.

Advice: Produce quality results on schedule. Develop and maintain communication links with clientele.

Contact: William Wentz, Director, 316/689-3410

Center for Continuing Engineering Education
Wichita State University

Description: *Goals*—To provide noncredit engineering education for professional development. To provide specialized engineering courses. To develop programs that extend the resources and knowledge of the university to the public. *Activities*—Develops and sponsors wide range of noncredit courses devoted to engineering education, including on-site credit courses for graduate engineering programs. *Audience*—Practicing engineers and people involved in engineering activities. *Innovations*—Offers the only professional engineering examination review courses in the state.

Structure: *Staffing*—Assistant dean of engineering. *Funding*—State restricted-use funds, course fees. *Program Evaluation*—Participants asked to complete an evaluation at end of each course. In some cases, participants are expected to master certain skills or use the information gained in their work.

Future Plans: Increase number of course offerings. Develop a mechanism for determining the needs of the engineering community.

Contact: Barbara E. Bowman, Coordinator, 316/689-3408

Center for Energy Studies
Wichita State University

Description: *Goals*—To conduct energy research, with special emphasis on applications in the State of Kansas. *Activities*—Conducts research related to various aspects of the electric utility industry in Kansas. Major research topics have included compressed air energy storage power plants for the Kansas electric utility systems, the use of ground source heat pumps in Kansas, the impact of residential electric appliances of electric energy consumption in Kansas, gas and electric residential heating in Kansas, evaluations of wind and solar energy systems in Kansas. *Audience*--Electric utilities or research agencies, general public. *Innovations*—One of the few agencies in the state actively involved in energy research. Personnel maintain close ties with the Kansas Electric Utilities Research Program, a research organization of six electric utilities in Kansas.

Structure: *Staffing*—Director, part-time secretary, faculty members involved in research, graduate students and research associates. *Funding*—Primarily from outside research contracts. Some state funds. *Program Evaluation*—Funded research conducted by the center is evaluated by the sponsoring agencies. In addition, the center staff meets approximately twice a year for an extended period of planning, evaluation, and assessment, and to set general goals of the center for the next six months.

Products: *Publications*—Final report for each outside research contract. In some cases, a separate internal report also published. Faculty members involved in research projects frequently publish results of research in refereed journals and conference proceedings.

Future Plans: Continue to expand efforts in energy research in concert with the Ph.D. program in engineering. Develop a set of new graduate courses in electric power and energy to complement the contract research projects of the Center and give graduate students employed by the center a better tie between their research and their graduate course work.

Advice: Develop a strong base of expertise among the staff, a close relationship with prospectivce funding agencies or clientele, and the ability to perform a unique service or offer special capabilities not generally available to the area.

Contact: Dr. Robert I. Egbert, Director, 316/689-3415

Rehabilitation Engineering Center
Wichita State University

Description: *Goals*—To enhance vocational opportunities for severely disabled persons through the application of engineering methodology to vocational barriers confronting these persons. *Activities*—Conducts research in three general areas: standards and assessment indicators for the work-site, work-site modifications to enhance employability, and independent living skills to enhance employability. *Audience*—Persons with severe disabilities desiring to enhance their employment opportunities and/or independent living possibilities, vocational rehabilitation counselors, sheltered workshops, ongoing industries needing help with work-site modifications or worker assessment. *Innovations*—Has developed an assessment tool with which to determine the residual capabilities of disabled persons. The center is involved with the "Timbers," a housing facility for persons with disabilities. The center uses center industries as a laboratory with which to test its modifications and is thus involved in all aspects of employment, housing, and transportation of disabled individuals.

Structure: *Staffing*—Director, five project directors, two technicians, six graduate assistants, three student assistants. *Advisory Board*—Eight members. The board has nationwide representation. *Funding*—Contract research and state general use. *Program Evaluation*—To comply with federal contracts received, center is required to undergo peer review, including a site visit by a team selected by the National Institute of Handicapped Research.

Products: *Publications*—Annual reports, videotapes, articles in technical journals, technical reports. *Awards and Recognition*—Members of the center invited to make presentations at national and international conferences.

Future Plans: Continue efforts to aid in the employment of disabled individuals. Expand services to the service job sector.

Advice: To initiate a rehabilitation center, you need a college of engineering and a client base. Determine the focus of the center through cooperation with the National Institute of Handicapped Research. Select a site by means of a nationwide competition.

Contact: Roy H. Norris, Director, 316/689-3415

Kentucky

Entrepreneurial Development Institute (EDI)
Kentucky State University

Description: *Goals*—To provide professional training for disadvantaged minority and women contractors. *Activities*—Offers week-long seminars on such topics as basic plan reading, standard drawings and specifications, bid preparation, computer spreadsheets, resource management, bonding, and financing. *Audience* —Kentucky small, minority, women, and disadvantaged highway contractors in the region. *Innovations*—New program, still expanding, brings beginnning contractors to a campus setting for intensive instruction in all facets of business administration and financial management.

Structure: *Staffing*—Director, staff assistant, secretary. *Advisory Board*—eleven members. *Funding*—Kentucky State University, Kentucky Transportation Cabinet, and Federal Highway Administration. Institute does not generate income. *Program Evaluation*—Individual course/instructor evaluations administered at each workshop. Overall evaluation of the EDI Training program administered after all workshops have been held. Success of the program determined by the participants. Participants' companies effectiveness is measured, before and after EDI, in the following fields: estimating, bidding, accounting procedures, resource management, project management, bids won, and so on.

Future Plans: Continue development of EDI for subcontractors of federal highway projects to enable participant companies to become prime contractors. Expand scope to include training of disadvantaged business enterprises in other industries in which minority participation is sought and where state and federal agencies or private firms are willing and able to become the national program for training and providing technical assistance to other states wishing to replicate the program.

Advice: Have workshops in accordance with participants' seasonal workload. Develop marketing plan to inform prospective participants.

Contact: Samuel K. Gyapong, Director, 502/227-6911

Small Farm Program
Kentucky State University

Description: *Goals*—To increase the quality of life for limited-resource farmers. To increase gross and net farm income for small farmers. To improve agricultural production, farm management practices, and resource management on small farms. *Activities*—Paraprofessionals work one-on-one with limited-resource farmers to teach improved farm management, resource management, and production practices. Specialists advise low-income farmers on marketing, resource management, and production problems. Workshops, extension meetings, the mass media, and personal contacts used. *Audience*—Small, limited-resource, part-time, low-income farmers. *Innovations*—The use of paraprofessionals for one-on-one program delivery. Planned teaching experiences through extension meetings. Newsletters and mass media methods. Extension marketing, production, and home garden demonstrations.

Structure: *Staffing*—Paraprofessionals: Ten small farm assistants work one on one with farmers. Professionals: state specialist for small farms and part-time farmers. One area specialist for small farms and home horticulture. *Advisory Board*—The State Small Farm Advisory Committee, ten members. *Funding*—USDA. Does not generate income. *Program Evaluation*—By program graduates and through comparisons yearly individual incomes and inventories of program participants. Observations of improvements and the family's quality of life while in the program are also evaluated.

Future Plans: Continue efforts to reach limited-resource farmers through the use of paraprofessionals, the mass media, publications, and one-on-one interaction.

Advice: Use extension demonstrations as a mode of teaching limited-resource farmers. Use paraprofessionals and their training to reach the "hard-to-reach" clientele. Consider the savings resulting from optimal use of farms resources as an evaluation criterion.

Contact: Dr. Marion Simon, State Program Specialist, 502/227-6437

Center for Coal Science
Western Kentucky University

Description: *Goals*—To promote and foster studies of the nature and properties (organic and inorganic) of coal and the nature and properties of cokes, coal-derived liquids, gases, and chars. To develop strategies to enhance the value of coal and foster its use in economically realistic and environmentally acceptable ways. *Activities*—Publishes coal science books, book chapters, and journal articles. Acquires patents. Offers M.S. degrees in Coal Science. Coal Characterization Laboratory participates in national "round robin" testing programs in the evaluation of laboratory performance. The WKU Laboratory has served as the lead laboratory and conducted a six-month "round robin" for Arkansas Power and Light to evaluate the power plant laboratories in its system. The WKU Laboratory has participated in five American Society for Testing and Materials (ASTM) Task Groups, developing procedures for coal analysis, and is currently the leading laboratory in a "round robin" with nineteen U.S. and Canadian laboratories to develop a procedure for the instrumental proximate analysis of coal. The WKU Laboratory has contributed data that have led to the development of three proposed ASTM standard methods and is participating in two more task groups for developing new standard methods of coal analysis. *Audience*—Coal and fossil fuel industry and research institutions and private companies. *Innovations*—Has probably the best-equipped Coal Characterization Laboratory of any university in the nation. State-of-the-art microcomputer-controlled coal analysis instrumentation available for faculty and student use. Laboratory designated a "state laboratory" for coal analysis and tests coal samples for several state agencies.

Structure: *Advisory Board*—Eleven persons. *Funding*—Primarily federal, state, and private grants, also Western Kentucky University. *Program Evaluation*—Center relies on its Coal Advisory Committee for evaluation of its activites and for direction. Criteria are continual funding by granting agencies, publications, success of graduate obtaining employment, and requests from industry for assistance.

Products: *Publications—Journal of Coal Quality*, many others. *Awards and Recognition*—Research awards. Teaching award. CASE Professor of the Year.

Future Plans: Obtain increased funding for coal research, increase publications, and increase public-service activity.

Advice: Obtain a firm commitment from participants before starting programs. Develop program fully before publicizing it.

Contact: Dr. John T. Riley, Director, 502/745-6020

Economic Development Teleconference
Western Kentucky University

Description: *Goals*—To conduct a statewide teleconference on economic development. To provide an opportunity for public and leaders of the community to hear the leading experts on economic development present the latest findings. To allow participants the chance to ask experts questions about economic development problems in their own area. *Activities*—Teleconference held July 1987. Each participant helped develop an action plan containing at least three ideas that could be taken home and implemented in the next six months. *Audience*—General public, community and business leaders, chamber of commerce officials, county judges, others interested in economic development. *Innovations*—This was the first statewide teleconference in this state on economic development and apparently the first in the nation.

Structure: *Staffing*—Five individuals from the university, president of the local chamber of commerce, two staff members from the Kentucky State Commerce Cabinet, facilitator. *Funding*—Federal grant paid for the teleconference. No fee was imposed and no funds were raised. *Program*

Evaluation—Comments received after the program, letters from participants. The real proof of success will be how many of the items listed on the "action plans" are actually carried out.

Products: *Publications*—"A New Vision For Kentucky's Future," which contains action plans developed by participants.

Advice: Do not underestimate the knowledge of the audience.

Contact: John C. Wassom, Interim Dean, College of Business, 502/745-3893

Financial Institutions Seminar

Western Kentucky University

Description: *Goals*—To provide timely and important information to CEOs of financial institutions from the regulators who set "the rules of the game" for financial institutions, from academicians who interpret the ramifications of the changes, and from executives who manage financial institutions and have to live with the changes. *Activities*—Presents seminars. *Audience*—CEOs of financial institutions (commercial banks, savings and loan associations, mortgage bankers, and financial planners) in western Kentucky.

Structure: *Staffing*—Nine individuals giving presentations: Three local bank presidents, two professors of economics, director of research for the Federal Reserve Bank of St. Louis, director of research for the Federal Home Loan Bank of Cincinnati, head of the Kentucky State Department of Financial Institutions, and director of research for the FDIC in Washington. *Funding*—Small amount of funds in excess of expenses was generated.

Future Plans: Hold a similar conference each year.

Advice: Allow those attending to have ample opportunity to ask questions during the meeting. Ask those who attend to provide suggestions (topics and presentors) for the next meeting.

Contact: John C. Wassom, Interim Dean, College of Business, 502/745-3893

Louisiana

Office of Technology Transfer

Louisiana State University, Baton Rouge

Description: *Goals*—To identify and protect new technology developed by faculty/staff. To license new technology to local and/or start-up companies wherever possible to create new economic entity and contribute to the economic development of the state. *Activities*—Applies for patents. Licenses techonologies. *Audience*—Primarily research faculty/staff of LSU and A&M College. *Innovations*—Acts in an advisory capacity to independent Louisiana inventors.

Structure: *Staffing*—Director, secretary. *Funding*—Primarily university internal funds. Cash flow from royalties currently minimal. *Program Evaluation*—Number of technologies developed, patented, copyrighted. Number of technologies licensed to private sector. Royalties received. Private-sector research grants generated by development of new technologies.

Products: Patents issued.

Future Plans: Expand identification/protection/licensing activities. Reduce legal obstacles to entrepreneurship. Identify sources and develop mechanisms for increasing availability of venture capital and management/entrepreneurial resources.

Advice: Cultivate faculty awareness and cooperation. Maintain continuous attention. Development of a successful program is a slow process: be patient. Understanding the economic development value of technology transfer and enthusiastic support from the upper levels of university administration are key to success.

Contact: Theodore Kohn, Director, 504/388-6941

Manville/NLU Pulp Paper Science Program

Northeast Louisiana University

Description: *Goals*—To provide entry-level paper industry employees with substantive background material about the paper industry so that they can be more successful on the job and have enhanced job mobility. *Activities*—Offers "Introduction to Papermaking," an overview of the papermaking process, including details of wood structure, woodyard operations, and chemical pulping; "Pulping, Bleaching, and Stock Preparation," including details of mechanical pulping and pulp washing, screening, and bleaching, paper machine systems, and stock preparation. *Audience*—Employees of the Johns Manville Corporation in Monroe, LA. *Innovations*—Lecture on the university campus by two Manville Corporation Ph.D.s on a weekly basis. Videotapes available at Manville in the training room produced by Tappi, which demonstrate to students the actual paper-making process. The tapes accompany the lecture and can be viewed independently at two sites.

Structure: *Staffing*—Three persons. *Advisory Board*—Seven persons. *Funding*—Manville reimburses employee's tuition costs upon successful completion of the course. Employees responsible for book costs. Manville also compensates the instructors for their participation. Classes held at NLU. *Program Evaluation*—Successful completion of five Pulp and Paper Science courses (fifteen academic hours) and fifteen hours of other NLU course work including computer science, psychology, management, mathematics, economics, and accounting.

Products: *Publications—Handbook for Pulp and Paper Technologists.*

Future Plans: Continue to make offerings available leading to certificates and degrees for Manville employees at NLU.

Advice: Industry and university administrators working cooperatively make the program a success. A task force is essential. Publicity in local papers about the courses helps. Use telephone registration (easy).

Contact: Dr. Martha B. Upshaw, Director, Continuing Education, 318/342-2111

USL 7 & 7 Program
University of Southwestern Louisiana

Description: *Goals*—To provide a four-year degree in industrial technology for oil industry workers whose "seven days offshore, seven days onshore" work schedule precludes a normal college schedule. *Activities*—Offers classes that meet every other week. Advises students. *Audience*—Offshore oil workers. *Innovations*--First four-year degree program of its kind in the U.S. Students commute to USL from several states.

Structure: *Staffing*—Director, faculty.

Contact: Louis Schwarz, Director, University College, 318/231-6830

Maryland

I/A Partnership Board
Towson State University

Description: *Goals*—To promote the coordination of industrial research and consulting activities. To improve communication between the college and the industrial community, to make the industry cognizant of the college's resources for scientific and technical research and to make available specialized equipment. *Activities*—Individuals involved in various committees within the university: faculty development committee, curriculum program, internships, cooperative education, employment advisory consulting, contracting, research. *Audience*—Chairs of the five departments in CONAMS (the consulting group), dean and special projects coordinator of CONAMS, representatives from corporations such as Noxell, Blue Cross/Blue Shield of MD, Citicorp/Citibank. *Innovations*—Partnership in this outreach program offers industry the opportunity to obtain economical solutions to scientific and technical problems that demand time, expertise, or equipment and may not be available from the industry's permanent resources.

Structure: *Staffing*—Dean, chairs of the various departments, special projects coordinator. *Advisory Board*—The I/A Partnership may serve in this capacity. *Funding*—Per consultation.

Products: *Publications*—Brochure.

Future Plans: Continue the program.

Contact: Dr. Donald R. Windler, Acting Dean, 301/321-2360

Towson State University Industry Luncheon Club
Towson State University

Description: *Goals*—To provide a forum for business executives and representatives of the university community to discuss issues of mutual concern.

Activities—Approximately six luncheons scheduled each academic year. Luncheon speakers selected for expertise on current issues in national and international affairs that affect business and industry in Maryland. Previous speakers have included ambassadors from the Republic of Korea and Egypt, members of Congress, and high-ranking officials from the Department of Commerce and State Department. Corporate executives of companies from the metropolitan Baltimore area belong to the club. These companies include AAI, McCormick & Co. Inc., Signet Bank, Maryland National Bank, Westinghouse Electric Corporation, Ernst & Whinney, John S. Connor, Inc., and more. *Audience*—Business leaders; TSU president, vice presidents, dean of business, and twelve faculty in business or fields with an international focus; students. *Innovations*—The type of opportunity offered to students to communicate with business and education leaders over lunch about current affairs.

Structure: *Staffing*—Program director, assistant, senior consultant, secretary. *Advisory Board*—Fourteen members. *Funding*—Dues. *Program Evaluation*—Outcomes have included: donation of excess dues to the university foundation, placement of students into internships in the State Department, development of good relationships between business and the institution. Success indicated by increased participation of the members and requests for invitations to the luncheons.

Future Plans: Increase membership.

Advice: Be aware of the time constraints of your participants and the number of benevolent financial contributions of their companies. Try to ensure that corporate members receive the types of programs and a forum for meeting new people that interests them as well as university administrators, faculty, and students.

Contact: Dr. Helen Giles-Gee, Program Director, 301/321-2360

Massachusetts

Rural Massachusetts (Center for)
University of Massachusetts-Amherst

Description: *Activities*—Conducts applied research on a wide range of development and conservation issues, including land use planning, natural resource management, economic development strategies, and affordable housing. Emphasis on adapting innovative, state-of-the-art approaches for use by local or state officials. *Audience*—Municipal officials and boards, state agencies, regional planning commissions.

Contact: Diane L. Randall, 413/545-2255

Michigan

Applied Mechanics Institute
Western Michigan University

Description: *Goals*—To facilitate academic and industrial collaboration and interaction in applied mechanics for southwestern Michigan, with emphasis on basic applied and industrial research and such services as routine tests, design verification, and utilization of AMI facilities. *Activities*—Conducts basic and applied research in such areas as elastic and inelastic nonprismatic columns, bars with intermediate loads, composite columns, bolted joints, geometrical modeling of mechanical systems, surface properties under large pressures, temperature effect on mechanical properties of steels during elastic impact. Facilitates industrial collaboration and interaction through technical conferences with representatives of industrial companies, industrial senior student projects, consulting, design verification, routine tests and services. *Audience*—Industrial companies in southwestern Michigan. *Innovations*—Conferences on specific technical problems encountered by industrial organizations are used to establish a working program that leads to research, consulting activity, services, and student involvement through a senior project.

Structure: *Staffing*—Director, faculty of the mechanical engineering department. *Advisory Board*—None. However, the department chair and the Institute for Technological Studies are directly involved in operations and decisions. *Funding*—Grants from Michigan Research Excellence Fund. *Program Evaluation*—Quality of services repeatedly complimented in writing by the industrial companies.

Products: *Publications*—Many. *Awards and Recognition*—Letters of recognition from B.O.C. Plant, Checker Motors, Kalamazoo Reel, Upjohn Company, J.G.J. Enterprise, etc.

Future Plans: Develop a central laboratory for technical assistance and services to industrial companies in southwestern Michigan. Develop laboratory facilities for MTS, laser-holography, vibration.

Contact: Dr. Meshulam Groper, Professor, 616/383-8012

Horticultural Economic Development Center (HEDC)
Western Michigan University

Description: *Goals*—To present practical solutions to the problems expressed by area horticultural representatives and to cultivate long-term procedures for future targeted investments. To arrive at solutions that utilize improved technology and better enable industries to compete in national and international markets. *Activities*—Consumer preference survey and marketing study for the production of seedless grapes conducted using two varieties of seedless grapes. The results were promising, and a follow-up study will be conducted with additional varieties. Survey mailed to nine counties in southwestern Michigan, the results of which will be used to develop a prospectus for potential investments encouraging horticultural growth in Michigan. Another study conducted evaluating plug production of seedling flats for the bedding plant industry. Second phase of this study currently in progress. Because there is a market demand for cranberries and some herb crops, the center has been investigating cultural implications and feasibility for their production in Michigan. *Audience*—Members of the horticultural industry in southwestern Michigan. *Innovations*—Newsletter published that informs members of activities and solicits their concerns. Pamphlets produced explaining projects and offering recommendations for future direction in the horticultural industry. Project results presented at local conferences. Codirectors in close contact with extension specialists and other experts in the field.

Structure: *Staffing*—Two codirectors, research associate chemist, secretary, temporary graduate research assistants. *Advisory Board*—Composed of faculty, cooperative extension specialists, and representatives of the horticultural industry. *Funding*—State of Michigan Research Excellence Fund, income generated by the HEDC. *Program Evaluation*—Criteria are jobs created, new businesses established, increases in sales, new products and techniques incorporated into the market place, needs of horticultural industry members met.

Future Plans: Establish a soil laboratory to provide elemental analysis for the greenhouse industry. Conduct research on the effect of the extended maceration technique for making wines from eastern red grape varieties, which should improve the quality of Michigan's red wine. Developing a nonfriable medium for shipping bare-root fruit trees to eliminate moisture loss and provide nutrients when transplanted.

Advice: Identify the area needs. Involve the people who will directly benefit from the program.

Contact: Michael E. Byrne, Co-Director, 616/383-0548

Materials Institute for Innovation and Enterprise
Western Michigan University

Description: *Goals*—To conduct research and development in advance materials (polymers, ceramics, composites). *Activities*—Developing an all-plastic engine, polymer coatings for aircraft and automotive components, lost foam casting technology. Has complete laboratory and testing facilities. *Audience*—Corporations such as Amoco, Briggs, and Stratton, McDonnell-Douglas, Ford, Deere, Dana. *Innovations*--Pioneered the all-plastic engine. Developed lost foam casting innovations.

Structure: *Staffing*—Director, other scientists. *Funding*—Corporate, state. *Program Evaluation*—Corporate reviews, department reviews.

Products: *Publications*—"Advanced Casting Technology," *ASM International*. Numerous articles on composite materials for *Internal Combustion Engines*. *Awards and Recognition*—Award from Amoco Performance Products for one of the twenty most significant innovations in petrochemical products. Award from American Foundrymen's Society for innovations in lost foam casting.

Future Plans: Complete development of all-plastic engine, composite materials laboratory, and composite coatings.

Contact: Jay Easwaren, Director, 616/383-4992

Paper Pilot Plant
Western Michigan University

Description: *Goals*—To maintain and operate a pilot plant for industrial contract research and development. To supply pilot laboratory facilities for student use. *Activities*—Equipment available for use includes a paper machine, aqueous coater, solvent coater, super calender, continuous digester, and paper-recycling equipment. The printing area has prepress equipment, small presses, and web presses. Extensive testing equipment is available for analysis of results. Client corporations use the facilities for investigations into product improvement, new product development, material substitutions, and preproduction samples. Products made are based generally on fibrous webs, their modification, and the chemicals used on these webs. *Audience*—Corporations and persons involved in the pulp and paper, printing and related industries. *Innovations*—Pilot plant has ability to produce a web, modify it, and print it at one site.

Structure: *Staffing*—Director, two assistant directors, technical associate, four operators, secretary. *Funding*—Clients' fees. *Program Evaluation*—Client response.

Future Plans: Complete computerized control and acquisition of data. Install an air-laid former. Continue fourdrinier upgrade.

Advice: Develop a solid system for guaranteeing client confidentiality. Produce a consistent, repeatable experimental procedure.

Contact: Carl Shuster, Director, 616/383-1803

Missouri

Center for Technology Transfer and Economic Development
University of Missouri-Rolla

Description: *Goals*—To help small to medium-sized businesses utilize state-of-the-art manufacturing technology. To transfer new technology from government and university labs to industry. *Activities*—Operates a Manufacturing Research and Training Center with a facility that includes state-of-the-art computer and flexible manufacturing systems. Assists in the economic development of small towns in rural Missouri. *Audience*—Small to medium-sized technical and manufacturing businesses. *Innovations*—Uses a statewide telecommunications network to provide instruction in local school districts and is developing funding for a unique manufacturing facility for research and training.

Structure: *Staffing*—Director, three professors, outreach coordinator, two secretaries, technician. *Advisory Board*—Being organized. *Funding*—State of Missouri and University of Missouri Extension.

Future Plans: Organize and develop funding for a Manufacturing Research and Training Center. Publish a book describing successful economic development programs in rural Missouri. Assist small Missouri companies in implementing new manufacturing technology.

Contact: H. Dean Keith, Director, 314/341-4151

Montana

Aid to Small Mine Operators
Montana College of Mineral Science and Technology

Description: *Goals*—To provide technical information to small mine operators in Montana. *Activities*—Visits all mining operations in the state and provides technical assistance on request. *Audience*—Montana mining industries. *Innovations*—Mineral identification service. Underground safety program recently completed. Three seminars on prospecting, placer mining, and mine development per year.

Structure: *Staffing*—Field agent. *Funding*—Bureau of Mines and Geology and the U.S. Department of Labor. *Program Evaluation*—Discussions with clients.

Products: *Publications*—*Directory of Mining Operations in Montana.*

Contact: Don Lawson, Field Agent, 406/496-4217

Ground Water Information Center
Montana College of Mineral Science and Technology

Description: *Goals*—To provide ground water information to citizens and agriculture industries. *Activities*—Collects chemical and physical data on water in Montana and provides raw data and analysis on request. *Audience*—Citizens of Montana. *Innovations*—Information provided on request through a publication service.

Structure: *Staffing*—Two hydrogeologists, data base technician. *Funding*--State Bureau of Mines and Geology, outside grants and contracts. *Program Evaluation*—Number of successful responses/numbers of total inquiries.

Contact: Thomas Patten, Hydrogeologist, 406/496-4153

New Hampshire

Special Data Collection
Keene State College

Description: *Goals*—To prepare a biannual report for the state legislature as it reviews the university system budget request. The report describes the import and export of dollars to and from the State of New Hampshire. *Activities*—Report preparation coordinated by the staff at the chancellor's office of the university system. Keene State prepares a report and submits it to the system staff. *Audience*—The members of the state legislature, the governor and his staff.

Structure: *Staffing*—None: assignments are made to existing personel. *Funding*—State. *Program Evaluation*—Success in receiving state funding.

Products: *Publications*—"The Economic Impact of The University System of New Hampshire on The State of New Hampshire."

Future Plans: Continue the report.

Contact: Kristine N. Howland, Assistant to the President, 603/352-1909 x 518

New Jersey

Center for Advanced Biotechnology and Medicine (CABM)
Rutgers University

Description: *Goals*—To construct and staff a "world-class" molecular biology research laboratory. To establish a series of service laboratories to provide state-of-the-art research services of use in biotechnology research. To provide fellowships and other educational programs in biotechnology. *Activities*—Construction under way on the facility, which will be completed in two years. Research and service activities being conducted in borrowed existing space during construction. Three new faculty members recruited. Six network laboratories (DNA synthesis, protein microchemistry, flow cytometry, biomaterials development, biomanaging, and computer/graphics support) being established. Research programs in molecular genetics, protein chemistry, and crystallography underway, have produced several publications. Clinical Research Center under construction to provide a resource for clinical trials. A major Fermentation Center being developed to provide high-quality cells and cell products in quantity. Eighteen fellowships awarded to support the training of undergraduate and graduate students to learn the technologies practiced in network laboratories. International symposium held on "Protein Domains: Molecular Insights into Structure/Function Relationships" held in cosponsorship with Fisher Scientific. Numerous seminars, lectures, and short courses are given. *Audience*—Pharmaceutical, agrichemical and biomedical industries. *Innovations*—Joint project of the two state universities of New Jersey, initiated and primarily supported by the New Jersey Commission on Science and Technology, and served by an advisory board with membership from the top-most positions of New Jersey industry. Major emphasis on basic research, with ties to industry.

Structure: *Staffing*—Faculty employed by CABM: three faculty employed by universities to direct network laboratories and satellite facilities: eight staff employed by CABM to staff basic research network, and satellites (includes postdoctoral fellows): thirty staff employed by universities to operate six satellites. *Advisory Board*—Thirteen members. *Funding*—Primary funding from New Jersey Commission on Science and Technology. Construction funding from the Commission, and the two sponsoring universities. Fees charged for services. Grants and contracts. *Program Evaluation*—Attainment of external funding goals, which will follow attainment of recruitment goals, which will follow construction of facilities; evidence of synergistic interaction with industrial partners via paid use of network laboratories, consultations, and contracts for research; research publications; patents; symposia and other educational events.

Products: *Publications*—Articles in scientific journals.

Future Plans: Continue to develop programs. Develop basic research programs in structural biology, molecular genetics, cell and developmental biology, and in molecular biology. Achieve full-scale recruitment staffing and operations by 1991. Establish additional network laboratories as need arises.

Contact: Robert M. Namovicz, Executive Officer, 201/463-4665

Center for Advanced Food Technology (CAFT)
Rutgers University

Description: *Goals*—To conduct basic interdisciplinary research on generic problems of concern to food industry. To contribute to Rutger's search for excellence. To improve the economic viability of the food industry in New Jersey. *Activities*—Conduct research projects. The two major projects are: "Water Relations: Reactions, Interactions, and Transport," aimed at a better understanding of the overall mechanisms and, in particular, the role water plays in the physichemical changes that take place in food systems; "Physical Forces in Food Systems: Extrusion Cooking" focusing on a fundamental understanding of the extrusion cooking process and resulting in quantitative design principles to control extrudate quality and improve design. *Audience*—Industrial members (food processing companies). *Innovations*—Program structured in a way that ensures maximum involvement of industrial scientist representatives of member companies and interaction between researchers who are members of various university departments involved in the projects. Highly effective monthly study group.

Structure: *Staffing*—Director, associate director, business manager, project manager, evaluator. *Advisory Board*—Fourteen members. *Funding*—State of New Jersey, membership fees. The program does not generate income. *Program Evaluation*—One-on-one contact and questionnaires asking members to rate the reports on research in terms of value to the m ain general level of interest. Criteria: number of member companies, indicated levels of interest by member companies, generation of patents and publications, creation of new jobs in New Jersey.

Products: *Publications*—"Semi-Annual Research Project Accomplishment Report" for each project. "Annual Research Initiation or Continuation Proposal" for each project. "Studies of the Maillard Browning Reactions Between Aspartame and Glucose" (article in journal). "Direct HPLC/MS Using a Fused Silica Capillary Interface," *Applications of New Mass Spectometry Techniques in Pesticide Chemistry* (article in book).

Future Plans: Increase members by at least twenty by end of calendar year. Convene periodic international symposia in areas directly related to projects. Complete new CAFT research facility in 1989.

Advice: For programs based in academe, ensure that you have commitment from top university management. Make certain that your research satisfies both the university's requirements for excellence in research and the "audience's" needs.

Contact: Myron Solberg, Director, 201/932-8306

Center for Ceramics Research
Rutgers University

Description: *Goals*—To gain and promote understanding the factors controlling desirable properties and behaviors of ceramics. To conduct studies in fundamental science associated with processes required to achieve desirable properties. *Activities*—Conducts research and development in monolithic ceramics, ceramic-matrix composites and thin films pertinent to structural, electromagnetic, and chemical applications. Processing studies for these materials include scientific aspects of synthesis, forming, and sintering as well as special chemical and physical routes to ceramic preparation. *Audience*—Companies with an interest in advanced ceramics. *Innovations*—Research carried out primarily by graduate students under the direction of faculty members. Undergraduate students frequently employed as technicians. University members have right to a royalty-free, nonexclusive patent license.

Structure: *Staffing*—Director, associate director, eighteen faculty members, twenty-nine graduate students, forty undergraduate students. *Advisory Board*—Industrial Advisory Board has member from each participating firm plus observers from the National Science Foundation and the New Jersey Commission on Science and Technology. *Funding*—Originally funded as a university-industry cooperative research center by the National Science Foundation in 1982. Current funding from the member companies with matching funds and capital equipment and building funds supplied by the State of New Jersey. *Program Evaluation*—An evaluator from the Rutgers Graduate School of Management in conjunction with the center director and a member of the Industrial Advisory Committee administers the evaluation in five areas: (1) documentation study, (2) network analysis, (3) an organizational description of the Ceramics Cooperation Research Center, (4) study of organizational effectiveness, (5) level of interest and feedback.

Products: *Publications*—Extensive list available on request. *Awards and Recognition*—National Materials Achievement Award.

Future Plans: Continue projects in the core program supported jointly by all industrial members. Use programs funded by individual companies and whose results are not shared with other member companies to transfer and apply the technology developed in the core program to the specific interests of individual members.

Advice: Listen to the recommendations of potential industrial members. Do not separate program staff from teaching/research faculty. Pay particular attention to the information/technology transfer mechanism.

Contact: Dr. John B. Wachtman, Director, 201/932-2724

Program in Fiber Optic Materials Research

Rutgers University

Description: *Goals*—To conduct generic research on a cooperative basis with industry and government in the area of fiber optic materials and devices to establish an international center of excellence for fiber optics. *Activities*—Operates broadly based, interdisciplinary research program that includes fiber optic materials synthesis and characterization, the drawing of optical fibers, and the evaluation and exploitation of advanced waveguide designs. Topics of current interest include fiber optic sensors, infrared fibers, biomedical applications of fibers, and active fiber devices such as lasers. *Audience*—Industrial, government, and national laboratories worldwide. *Innovations*—Corporate sponsors help select research thrusts of program. Center, established by the New Jersey Commission on Science and Technology, provides matching funds for both operating and capital equipment budgets.

Structure: *Staffing*—Faculty from nine departments conduct research in fiber optics, eight staff, two postdoctoral, thirty-two graduate and thirty-five undergraduate students. *Advisory Board*—Corporate advisory board of twenty-one members. *Funding*—Corporate sponsors, federal agencies. *Program Evaluation*—Corporate sponsors evaluate all research programs semiannually. Research publications and patents are important criteria for evaluating program productivity. Continued corporate funding also indicates the level of interest in the work from the private sector.

Products: *Awards and Recognition*—Received $1.65 million grant from Johnson & Johnson to initiate research in biomedical applications of fiber optics.

Future Plans: Expand program in the areas of fiber optics not devoted to telecommunications. Complete new research center in 1989 to house this program on the Busch Campus of Rutgers. Increase number of joint projects with other universities and industrial laboratories, particularly in the areas of infrared materials and fiber sensors.

Advice: Strive for state-of-the-art research programs and equipment attractive to outside sponsors. Cultivate industrial and national laboratories as well as federal agencies in establishing a research effort. Stress the interdisciplinary approach to problem investigation.

Contact: Dr. George H. Sigel, Director, 201/932-4729

Collaborative Program with Public Service Electric and Gas (PSE&G)

Thomas A. Edison State College

Description: *Goals*—To upgrade the knowledge and skills of Public Service Electric and Gas's

(PSE&G's) existing work force to meet changing technological demands. To help PSE&G employees earn the degrees that will improve their ability to work effectively in the nuclear industry. To manage a time-efficient and cost-effective program that will prepare employees to meet prospective federal regulations. *Activities*—Planned for maximum use of existing educational resources and identified additional resources needed. Resulting project combines the resources of five educational providers, uses the technical expertise of PSE&G staff as teaching resources, and allows individual students to progress expeditiously through the degree program. Coordination and management of the project done through Edison's Center for Corporate Partnerships and the PSE&G's nuclear training departmentActivities on two levels: continuing coordination among the educational providers and direct student services. Direct student services include orientation sessions to explain the joint endeavor, set expectations for all participants, and encourage developing peer support groups among the participants. *Audience*—PSE&G employees, including all licensed nuclear reactor operators and others interested in the nuclear field. *Innovations*—This program is notable for its structure, its ability to combine resources from many educational providers, its ability to provide cost-effective and time-efficient degree-completion strategies for participants, and its focus on creating peer support groups to enhance student success.

Structure: *Staffing*—Edison staffs this project with regular college employees. Key personnel include administrator, corporate programs; director, corporate programs; academic dean. *Advisory Board*—Center for Corporate Partnerships has advisory board of ten representatives from client industries. *Funding*—College's regular operating budget, PSE&G. *Program Evaluation*—Individual participants evaluate the success of the project through the speed with which their questions are answered, and needs are met and, ultimately, how well the system supports their progress toward a degree. PSE&G measures effectiveness by asking questions like: Are people making academic progress? Are individuals' needs being met? Are the corporation's goals met? Does the project meet or exceed its specific service goals? Edison examines student, institutional, and economic impact variables. The college will compare students' academic progress in a corporate setting with that of students enrolled as individuals. The specific program structure will be assessed to answer questions like: What is the number and kind of collaborators? How effective is the project in making the maximum of the individual students' learning outside the classroom? How effective is it in identifying and using available educational resources? In addition, the nature and strength of institutional relationships will be assessed. Do the collaborations between Edison/PSE&G and Edison/other colleges lead to others? Does the value of this project attract other colleges as partners in joint ventures? How can this model be implemented in other organizational settings?

Products: *Publications*—"Corporate Education Partnerships: A Case Study on One Edison/Corporate Agreement," in Proceedings of George Mason University's Fifth Annual Non-Traditional/Interdisciplinary Programs Conference. Descriptive articles submitted by PSE&G to *Nuclear News* and to *Nuclear Training*.

Future Plans: Double the number of participants in the next year. Continue to work with PSE&G with this project and others. Implement this model elsewhere and expand Edison's work with collaborative partnerships.

Advice: Acknowledge needs in common, recognize differences that exist, be creative and flexible in design and implementation. Talk often, and keep your collaborative partners informed of all relevant activities.

Contact: Dr. Sonja A. Eveslage, Director, 609/984-1168

New York

Department of City and Regional Planning

Cornell University

Description: *Goals*—To conduct studies of the incidence and impact of industrial restructuring in upstate cities. *Activities*—Organizes cooperative faculty-graduate student-community teams to do studies of current issues. *Audience*—City governments, community groups.

Structure: *Staffing*—Three faculty part time, average of one graduate assistant part time. *Funding*—Partial expenses from client groups.

Products: *Publications*—"Binghamton: Case Studies in Urban and Economic Development." "Report in the Ithaca Economy."

Contact: Pierre Clavel, 607/255-6212

The Food and Agriculture Industry: Its Impact & Future

Cornell University

Description: *Goals*—To increase knowledge and understanding of the food and agriculture industry as a regional economic system and to stimulate feasibility studies, strategic planning and policies leading to economic development. *Activities*—Provides inservice training to extension agents/specialists. Assists counties with impact analysis studies. Assists agents in five state regions with input in conferences. Conducts feasibility studies. *Audience*—Extension agents/specialists, county planners and economic developers, county/regional legislative decision makers. *Innovations*—A "systems" inservice and development approach stimulates grass-roots action.

Structure: *Staffing*—Part-time college program specialist, eight faculty instructors/field support as needed. *Advisory Board*—Ad hoc faculty/agent committee of 6-8 members. *Funding*—Cornell Cooperative Extension/College of Agriculture and Life Sciences. *Program Evaluation*—Evidence of counties/regions conducting impact analysis. Evidence of strategic planning and policy at regional level. Number/amounts of private sector grants received.

Products: *Publications*—Training manuals with modules. "The Agricultural Industry: Its Impact and Future."

Future Plans: Expand series to food and agriculture industry. Seek faculty interdependent coordinator and conduct regular training.

Advice: Develop a large-scale institutional research, teaching, and extension support base that has credibility with the food and agriculture industry and political system decision leaders.

Contact: Derwood G. Burns, Program Specialist, 607/255-3132

Institute for Industry Studies

Cornell University—NY State School of Industry and Labor Relations

Description: *Goals*—To deliver specialized educational programs for workers, based on applied research specific to the industry in which they are employed. *Activities*—Research reports prepared on the automobile manufacturing and food processing industries, covering economic trends and labor-management relations. College credit course designed and offered to automobile workers in Western New York. *Audience*—Employees in specific industries. *Innovations*—Custom-made course materials based on applied research in specific industries.

Structure: *Staffing*—Two professionals, secretary. *Advisory Board*—Advisory committee for each program consisting of union and management officials in the organization for which the program is offered. *Funding*—ILR State budget. Other expenses, including part-time faculty, travel, and materials paid for by sponsoring organization. *Program Evaluation*—By student participants and program sponsors in terms of impact on employee involvement in solving work-place problems.

Future Plans: Apply this concept to other industries.

Advice: Be willing to invest in course materials preparation and selection of instructors with specialized knowledge.

Contact: Lou Jean Fleron, Director, 716/842-6180

Export New York

State University of New York

Description: *Goals*—To help New York companies sell their products to buyers in foreign countries. *Activities*—Conduct seminars and training programs, market research, technical assistance in the formation of World Trade Councils and one-on-one counseling for exporters, operates MBA program. Maintains a close working connection with State and the PRC, national trade councils and administrations. Campuses currently participating: Binghamton, Stonybrook. *Audience*—Companies in New York State wishing to export their products.

Products: *Publications*—Introduction to Exporting (1984)

Contact: John Mather, Director, SUNY Business Services, 518-443-5392

New York State Trade Adjustment Assistance Center
State University of New York at Binghamton

Description: *Goals*—Provide assistance to businesses adversely affected by foreign imports in New York State. *Activities*—The center is presently providing technical assistance to 42 companies. The assistance involves restructuring of companies, engineering assistance where applicable, and financial assistance.

Structure: *Funding*—International Trade Administration

Contact: John Lacey, Director, 607-771-0875

North Carolina

Job Training and Placement for Older Workers Project
North Carolina Central University

Description: *Goals*—To provide training for economically disadvantaged individuals fifty-five and older to help them find jobs in Durham City and County (which is currently experiencing a high number of displaced workers because of rapid economic growth). *Activities*—Conducts classes training participants as day care providers. Offers services for private employers and older individuals in Durham City and County, including job assessment, job clubs, job-seeking skills, and counseling for various industry jobs, especially food service and retail. *Audience*—Older Americans who are economically disadvantaged.

Structure: *Staffing*—Three job developers. *Funding*—North Carolina Division of Aging, under the Job Training Partnership Act. *Program Evaluation*—Enrollment and placement of the participants.

Contact: Dr. Clarence Brown, Program Director, 919/683-6240

North Carolina Institute of Economic Development
North Carolina Central University

Description: *Goals*—To conduct research on economic development issues in the State of North Carolina and analyze their impact on the minority population. To provide data for public policy on economic development in the state. *Activities*—In the process of selecting staff and developing a research agenda. Has already attracted funding from private sources and is expanding funding to state government sources. *Audience*—Legislators, public policy makers, community leaders, business planners, educators, students. *Innovations*—Will publish papers and monographs in an area where data are virtually nonexistent. There will also be symposia.

Structure: *Staffing*—Now developing a staff. *Advisory Board*—Twenty-member Board of Directors and a panel of ten eminent scholars. *Funding*—The program will generate income. It will also be funded by grants from private sources and from the state legislature. *Program Evaluation*—The quality of the research projects will be the major criterion. Will also arrange for peer review.

Future Plans: Develop the staff and research projects.

Contact: Dr. Tyrone R. Baines, Executive Assistant to the Chancellor, 919/683-6154

Economic Development Summit
University of North Carolina at Asheville

Description: *Goals*—To provide a short list of priority projects to promote community economic development. To initiate strategies to implement these projects. *Activities*—Central event was an all-day conference of community leaders for presentations, discussion, and goal setting. Area chamber of commerce enlisted as cosponsor. Coordinating committee established. General structure for the event agreed upon. Investigative tasks to be reported upon at the summit assigned. Broad publicity arranged. Regional newspaper produced a special series of background articles. Participants preregistered, each registrant assigned to interview another participant or other key person. Reports on these interviews collected, summarized, and circulated prior to the summit in a "White Paper." Group leaders recruited and trained. Logistical preparations made. At the summit itself, presentations on the investigative work, reports on small group deliberations, voting by the total group to select priority projects, and finally an assignment of participants to task forces based on the voting outcomes. After the summit, continuing work by members of the task forces, further refinement of objectives, organization of additional working groups, and an ongoing process of communication and interpretation to ensure that the goal of implementation is achieved. *Audience*—Civic and business leaders in the community perceived to have influence on the deployment of public and/or private resources to support economic development activity. *Innovations*—Structure ensured that the total group would reach specific decisions within the course of the day. Format enabled participants to gather from across many traditional turf boundaries. Decisions reached were followed immediately by concrete steps to implement them.

Structure: *Staffing*—The university chancellor spearheaded the project, drawing upon members of the university faculty and staff, staff of the cosponsoring chamber of commerce, public officials, and citizens from the private sector. *Advisory Board*—Five-member coordinating committee. This smaller group drew extensively upon the full boards of the cosponsoring organizations for assistance. *Funding*—Private enterprise underwrote materials and printing. Leaders of the cosponsoring organizations contributed time and staff. *Program Evaluation*—By the end of summit, both the number and quality of participants were outstanding, leaders had been drawn together from across the total spectrum of community interest groups, and the group decisions about priorities had been made. To see projects actually implemented will be the ultimate criterion of evaluation.

Products: *Publications*—"Economic Development: 1987 and Beyond" submitted to all participants in advance. *Awards and Recognition*—Leadership in producing the summit has dramatized the university's commitment to serving the economic development needs of the area. This initiative has built tremendous good will between town and gown.

Future Plans: Expand the summit to a statewide version. Continue the work of the task forces to implement projects.

Advice: Form a coalition to sponsor the event that incorporates effective and respected nonacademic groups. Enlist the highest level of civic and business leadership that exists in the community. Develop an organizational structure adequate to manage the extensive preparation and follow-up activity required

Contact: Tom Byers, Special Assistant to the Chancellor, 704/251-6500

Ohio

Dislocated Workers, Entrepreneurial Training Pilot Project

Bowling Green State University

Description: *Goals*—To equip persons in eleven (target group) Northwest Ohio counties successfully to meet unmet market needs within the region where they now live. This will be accomplished by a comprehensive training program that will lead to self-employment (and jobs for others) and to the enhancement of the employability of those so trained.

Contact: George Howick, Director, Management Center, 419/372-2807

Center for Economic Education

University of Akron

Description: *Goals*—To coordinate, service, encourage and improve economic understanding. *Activities*—A university educational organization established in the college of education. Conducts seven workshops annually among local school districts in northeast Ohio to assist them in incorporating economic education into their curricula. Conducts the American Economic Seminar, a two-day seminar for high school students, in cooperation with the Akron Rotary Club and the Akron and Summit County Public Schools. Convenes the Northeast Ohio Teachers' Conference on Consumer/Economic Education, a one-day conference for approximately 250 teachers. *Audience*—Teachers, students, and administrators in K-12 parochial and public schools. *Innovations*—Awards graduate credit through conferences, workshops, and seminars to promote greater understanding of economic concepts and principles among students and to introduce the latest teaching methods in the discipline. Makes direct grants available to school systems for introducing economic thought to primary, elementary, and secondary classrooms.

Structure: *Staffing*—Director, administrative assistant, student assistant, graduate assistant. *Advisory Board*—Thirty-four members. *Funding*—University Development Office, grant from Firestone Tire and Rubber Company. *Program Evaluation*—Each function of the center evaluated through subjective critiques provided by participants. Evaluations separately designed to suit each function.

Products: *Publications*—"High Cost," "Energy Efficient Economics," "Help Beet Inflation," "Economics and Crime," "One Man's Trash is Another Man's Treasure," "Mini But Mighty: The Small Business in Our Community," "Globalnomics (A Study of Economics in French III and IV classes)," "Where do Jobs Come From? Derived Demand-Computer Application for Gifted and Talented High School Students," "Public or Private: Public Goods and Services-Computer Application for Gifted and Talented High School Students," "Changing Taxes-Computer Application for Gifted and Talented High School Students," "Why Competition-Computer Application for Gifted and Talented High School Students." *Awards and Recognition*—1980 National Model Center Award presented by the Joint Council on Economic Education. 1986 Recognition Award for Outstanding Achievement by the Joint Council on Economic Education. In 1987, center director was appointed State Director for Northeast Ohio for Economic Education for Clergy. Seminar participants have received recognition for excellence in the teaching of economics on the state level by Standard Oil and on the national level by the International Paper Company Foundation Awards Program.

Future Plans: Develop a conference series for leaders in theology, business, and economics. Develop and present course on concepts and curriculum design in economic education for graduate and undergraduate students majoring in education.

Advice: Develop a support group from all sectors of the community. Establish an adequate and secure monetary commitment. Create and maintain effective liaisons with influential leaders among the various educational establishments.

Contact: Dr. Fred M. Carr, Director, 216/375-7762

Edison Animal Biotechnology Center (EABC)

Ohio University

Description: *Goals*—To develop animal biotechnology, the most recent and complex area of biotechnology. EABC is the first center worldwide to focus on this aspect of biotechnology and has taken on the role of developing this field of biology for commercial applications. Current priorities include: (1) gene transfer in laboratory animals to produce transgenic animals to serve as models for the study of human diseases and the development of new pharmaceuticals in animals and humans; (2) gene transfer in agricultural animals to increase growth rates, efficiencies of feed utilization and disease resistance characteristics in farm animals; (3) development of methods to deliver genetic instructions into living animals for the production of protein pharmaceuticals within livestock; and (4) the production of protein biologicals within animals as a production method to replace commercial animal cell culture production. *Activities*—Active research using model laboratory animals is in progress in all of the areas described above. Several lines of transgenic swine containing genetic constructions for the regulated expresion of growth hormone have been produced. Production and testing of EABC developed systems is carried out by the linked, for profit, Ohio corporation, Embryogen, Inc. *Audience*—The program is directed toward the population of the State of Ohio and its economic development through agricultural innovation and development of new industries within Ohio, based on animal biotechnology. *Innovations*—EABC is unique from most other biotechnology or economic development programs because it is highly focused on a specific techonogy initially developed within the State of Ohio, building on existing advantage and strength. EABC is also unique because of the codevelopment of the pioneering company in the field of animal biotechnology, Embryogen, Inc., along with the EABC. The State Department of Development believes in the literal building of a new industry through university/technology/industry cooperation. Three universities form the academic basis of the EABC bringing the full weight of the technological capabilities of the state to this center.

Structure: *Staffing*—Administrative director (business manager); administrative assistant; three secretaries; head, Molecular Biology; head Cellular Biology; head, Developmental Biology; eight senior scientists; twelve scientists; sixteen technicians; twenty-two support university faculty. *Advisory Board*—The EABC has an authority consisting of nine members from the university and industrial components of the partnership. EABC also has a Scientific Advisory Board of nationally prominent scientists from throughout the United States. *Funding*—The EABC was established by a $5,100,000 grant from the state of Ohio with continuing biannual contributions of approximately $2,000,000 per biennium for the next decade anticipated. EABC also has contracts from industry totaling $750,000 per year and grants from federal agencies of $2,500,000 per year. *Program Evaluation*—The program success will be based on the development of new technolgy and on new products that can be produced in Ohio or jointly with an Ohio corporation. This center will be evaluated on hard product development, not service or industry assistance.

Products: *Publications*—Many. *Awards and Recognition*—Many.

Future Plans: Increase size of staff and scientists to a level of twenty senior scientists and associated personnel. Achieve funding self-sufficiency from contracts, royalties and grants by 1995.

Advice: Focus on specific, relatively narrow goals. Develop Center around existing strengths.

Contact: Dr. Thomas E. Wagner, Director, 614/593-4713

Technology Development Assessment
Wright State University

Description: *Goals*—To help the Area Progress Council to better understand the nature and number of technology-oriented companies that have moved into the Dayton area in the last five years. To determine the characteristics and attributes that a technology-oriented company desires in choosing a locaton. To provide a data base on technology companies that have moved to the Dayton area and to ascertain the important factors in the decision-making process for such moves. *Activities*—Compiling complete directory of technology-oriented companies in the Dayton area, including those which have located in Dayton in the last five years. Conducting a study to determine the factors governing the location decision by such companies. *Audience*—Area Progress Council and Wright State University.

Structure: *Staffing*—Two faculty members involved in the study. *Funding*—The Area Progress Council, Wright State. *Program Evaluation*—Satisfaction or lack thereof from the Area Progress Council.

Products: *Publications*—Final report to the Area Progress Council. *Awards and Recognition*—Funding award from the Area Progress Council.

Future Plans: Consider continuing collaboration with the Area Progress Council.

Advice: In nurturing closed-end projects of this nature, clearly establish with the faculty members and the agency seeking the study the exact nature of the study to be undertaken and the time frame in which the work is to be accomplished.

Contact: Dr. Robert Premus, Professor of Economics, 513/873-3482

Oregon

Adjunct Faculty from Industry
Oregon Institute of Technology

Description: *Goals*—To provide state-of-the-art instruction through the employment of adjunct professors from business and industry. *Activities*—Offers junior-and-senior level instruction in four areas of engineering and business technology. Since most of the students are evening-only students who work in local high-technology industries, a major effort was made to employ adjunct faculty currently employed in metropolitan industries. *Audience*—Evening technology students, part-time adjunct faculty.

Structure: *Advisory Board*—Portland Center Advisory Council of eight members.

Contact: Dr. Richard M. Moore, Director, OIT-Portland Center, 503/464-3066

Senior Projects
Oregon Institute of Technology

Description: *Goals*—To provide each senior student with a full-scale, client-based senior project in engineering technology and/or business. *Activities*—The senior project is one of the most important elements of the programs at Oregon Institute of Technology. Each student undertakes a project that summarizes all of the learning previously undertaken, builds the project, demonstrates it, and presents a written report and an oral report. Many businesses and organizations supply proposed projects and even materials and test equipment for use by seniors. Each year, several dozen projects are patentable, and 6-12 are actually patented. *Audience*—Students and future employers. *Innovations*—Use of client-based projects rather than dreamed-up projects, "capstone" nature of projects, strong support by business and industry.

Structure: *Staffing*—Total faculty. *Advisory Board*—Each curricular area has advisory committee. *Funding*—Mostly from students; however, more industries now providing materials and instrumentation. *Program Evaluation*—By advisory committees as well as follow-up service of graduates and employers.

Contact: Dr. Christian Eismann, Dean Academic Affairs, 503/882-3787

Oregon Business Week
Western Oregon State College

Description: *Goals*—To foster a positive environment and understanding for economic development among students and business leaders. *Activities*—Provides orientation and training seminars for business "leaders." Conducts intensive institutes for selected Oregon students. *Audience*—Students, school teachers, and business "leaders." *Innovations*—Basic principles and theory followed by hands-on computer-assisted simulation for business operations: entrepreneurship, management, marketing, finance, profit and growth, cooperatively and jointly offered by Western Oregon State College, Associated Oregon Industries, and Oregon Department of Education.

Structure: *Staffing*—Over fifty Oregon business executives, including personnel of Associated Oregon Industries, Oregon Department of Education, and Western Oregon State College. *Advisory Board*—Sevem members. *Funding*—Oregon business community. *Program Evaluation*—Student survey and feedback. Resource people and program staff evaluated yearly.

Future Plans: Add delegates and expand sessions in other locales.

Contact: George L. Wyatt, Executive Director, 503/838-1220 x421

Pennsylvania

ESU Ben Franklin Partnership
East Stroudsburg University of Pennsylvania

Description: *Goals*—To encourage cooperation with Pennsylvania industries. *Audience*—Industrial problem solvers (engineers, biologists, etc.), university faculty and staff, graduate students. *Innovations*—Close cooperation, industry-university team involving industrial pension, faculty, staff and students on all projects.

Structure: *Staffing*—Six faculty (part-time), four staff (full-time), about twenty students (graduate and undergraduate computer science). *Funding*—University in-kind, industry, Ben Franklin grant. *Program Evaluation*--Contribution of robot workers, writing of graphics, software, etc.

Products: *Publications*—*A Concept Space for Experimentation on Artificial Intelligence,* Proceedings of the National Computer Conference-NCC87, 1987. *NLI Template: An Approach and Tool for Building Practical Natural Language Interfaces.* Proceedings, Annual Conference of the Association for Computing Machinery, 1985. Two videotapes with the same titles. *Awards and Recognition*—Ben Franklin Award for Innovation, 1986.

Future Plans: Continue operation.

Advice: Develop close cooperation in the form of a mixed team—industry person, faculty member, staff member, student—on each project.

Contact: Professor Richard D. Amori, Chairman Computer Science Department, 717/424-3447

Texas

Center for Applications of Advanced Technology
Lamar University

Description: *Goals*—To identify through research existing technologies that can be packaged, taught, and evaluated in order to promote economic development. *Activities*—Utilizes interdisciplinary planning, study, research, and consulting initiatives directed toward specific indentification of job opportunity training with the goals of realistic placement of participants in existing employment situations. *Audience*—Individuals unemployed due to economic displacement. *Innovations*—Utilizing "vestibule training" for teaching clients. Students recommended by local employment agencies. Deals with each student on an individual basis. Placement rate over 90 percent.

Structure: *Staffing*—Program director and a coordinating secretary/program developer. *Advisory Board*—Eighteen-member editorial review board exists as an advisory board for journal publication. *Funding*—State grant. Currently initiating programs that will generate income. *Program Evaluation*—Computer training, evaluated by trainees placed. Computer business plan preparation, evaluated by client participation. Technology transfer journal publication, evaluated by number of subscriptions.

Products: *Publications—Technology Transfer Advocate*, a semiannual. *Awards and Recognition*—Various clients placed in jobs have written letters commending computer training program.

Future Plans: Develop programs into income-generating activities.

Advice: Plan ahead, if possible. Establish realistic programs. Control programs with an eye toward objectives.

Contact: Dr. Bob E. Wooten, Director, 309/880-8649

The Demand Training Survey
Lamar University

Description: *Goals*—(1) To provide planning data to the Private Industry Council (PIC), the local adminstrative entity for Job Training Partnership Act (JTPA); (2) to promote JTPA within the business community; and (3) to promote quality training programs. *Activities*—For the fifth consecutive year, the Demand Training Survey will provide the Private Industry Council with information on entry-level job opportunities in Hardin, Jefferson, and Orange counties. The data are utilized by the PIC when appropriating JTPA funds. Through the use of the survey in planning, the PIC actively seeks to serve new and expanding businesses. The survey, because it includes personal interviews with chamber of commerce executives and others involved in economic development, is also a means of creating an awareness of the employer incentives available under JTPA. In support of these promotional efforts, and to help ensure quality training programs, Lamar also conducts professional growth workshops for the staff of JTPA-funded agencies. *Audience*—The Private Industry Council and the business community. *Innovations*—The approach of the PIC is unique in that it has sought to identify employer needs and supports job creation through the funding of a Small Business Assistance Center, a Bid Resource Center and the Demand Training Survey. The Demand Survey is the only locally funded JTPA technical assistance program in the state.

Structure: *Staffing*—The program is supervised by the Dean of Graduate Studies and Research. Program coordinator; training coordinator; secretary; data analysis (part-time). *Funding*—The program is funded under the Job Training Partnership Act. Funding is for a one-year period and is based on a proposal submitted to the Private Industry Council. *Program Evaluation*—The Success of the Demand training survey is reflected in the Service Delivery Area's ability to meet state-mandated job placement performance standards. Each workshop is evaluated by the participants. The staff of JTPA agencies are also included in planning sessions for most workshops. Internal evaluation is also an essential ingredient in planning.

Products: *Publications—The Demand Training Survey Report. Awards and Recognition* —The program has been featured in conferences by the the

Texas Association of Private Industry Councils and the National Job Training Partnership, Inc.

Future Plans: Because of requests from other Service Delivery Area, the Lamar staff is developing a proposal to provide technical assistance to other areas interested in establishing a similar demand training survey. The University plans to continue the program in Southeast Texas as long as it is needed.

Advice: (1) Investigate the possibility of using a local college or university as a resource. (2) View the program as a long-term effort.

Contact: Geneva Miller, JTPA Coordinator, 409/ 880-2283

Border Business Indicators
Laredo State University

Description: *Goals*—To discover and report the trends in average business performance for the Texas border region. *Activities*—Collects data for an ongoing survey of six Texas border cities regarding changes in retail sales and hotel/motel occupancy. Data reported weekly. Weekly, monthly, and yearly comparisons made. Additional growth and activity trend data (unemployment, city power connection's building permits, airport activity, etc.) collected from various cities and agencies. *Audience*—Business executives of the Texas border region; city, area, and regional planners. *Innovations*—Each of the six border cities divided into logical economic sectors (i.e., downtown, suburban). Within each sector a representative sample of the business community is made. Each week, sample data collected by telephone from participants.

Structure: *Staffing*—Director-Director for International Trade, clerk/typists. *Funding*—State legislature, subscriptions.

Products: *Publications*—"Border Business Indicators."

Future Plans: Consider expanding the project to include additional data and development of a data resource center at LSU specializing in border economics.

Contact: Phillip J. Lane, Director, 512/722-1472

Economic Development Programs
Midwestern State University

Description: *Goals*—To build a North Texas regional economic data base. To build better communication of economic/business news to the community. To build better communication of the economic impact of university activities to the community. *Activities*—Building an economic data base for Northern Texas. Expanding the scope of articles published in the *Midwestern Business and Economic Review* and the *Bureau Report*. *Audience*—Community businesses, municipal governments, and the public. *Innovations*—Substantial involvement of community business leaders in the participation and planning of conferences. Some articles in the *Review* contributed by business leaders.

Structure: *Staffing*—One director, secretary, two graduate research assistants. *Advisory Board*—Made up of business/community leaders. *Funding*—University foundation (private donations), minor support from state sources. *Program Evaluation*—informal comments of the Community Advisory Council members, attendance at the conferences, number of requests for information from the public, other criteria.

Products: *Publications*—*Midwestern Business and Economic Review, Bureau Report,* Conference Series.

Future Plans: Expand the data base for northern Texas. Encourage outside contributions to the Midwestern Business and Economic Review and the Bureau Report. Seek more deversified sources of funding.

Advice: Establish a good working relationship with community business leaders.

Contact: Yoshi Fukasawa, Director, 817/692-6611 x4365

Executive Leadership Program
University of Texas at San Antonio

Description: *Goals*—To increase management effectiveness. *Activities*—Conducts a leadership workshop. *Audience*—GS-13 and above government employees.

Structure: *Staffing*—Workshop lecturers. *Funding*—Contribution of 25 percent, 30 percent, or 35 percent depending on number of times program is conducted during the year. Contributions distributed 25 percent to the university and 75 percent to the college of business. *Program Evaluation*—Evaluation form given out. Overall rating of 85 percent or above is deemed "excellent."

Future Plans: Continue workshops at rate of ten times per year.

Advice: Determine needs and conduct a curriculum review after the first class.

Contact: Bob Drumm, Director, 512/691-4313

Vermont

Entrepreneurial Training Program
Johnson State College

Description: *Goals*—To instruct individuals on how to start and maintain a business. *Activities*—Classroom instruction. Audience—Displaced workers.

Structure: *Staffing*—Four instructors, coordinator. *Advisory Board*—five members. *Funding*—Job Training Partnership Act. *Program Evaluation*—Businesses started, business plans completed.

Products: *Publications*—Business plans.

Future Plans: Continue the program.

Contact: Dale L. Lane, Director, 802/635-2356

Washington

IMPACT Center
Washington State University

Description: *Goals*—To harness science and technology for the purpose of expanding the State of Washington's agricultural exports. *Activities*—Conducts research, extension services, and teaching in: (1) assembly, analysis, and dissemination of improved market information, (2) providing technical solutions to international marketing problems, (3) developing alternative products, processes, and strategies for export. *Audience*—Agricultural producers, processors, marketers, and export service organizations. *Innovations*—Multidisciplinary scientific efforts targeted to agricultural export problems and opportunities.

Structure: *Staffing*—Permanent administrative: director, secretary, administrative assistant. Scientific: Agricultural economist, cereal chemist, horticulturist. Temporary: three research associates, six supervisory scientists, other scientists on specific issues. *Advisory Board*—Acts as advisor to the international marketing efforts of the impact center and Washington state's departments of agriculture and of trade. *Funding*—State funds, external grants *Program Evaluation*—State legislature looks primarily at job creation. Individual projects evaluated on the basis of achievement of objectives.

Products: *Publications*—The Impact Center publishes a popular information series. Scientists also publish in appropriate journals.

Future Plans: Explore new market opportunities and technical problems. Disseminate knowledge of these opportunities to potential exporters. Develop solutions to technical problems. Help agriculture "engineer quality" in its products to meet users' actual needs.

Advice: To make the program effective, ensure that scientists have a strong service orientation. Show scientists how valuable their unique skills are, and they will respond enthusiastically. Be persistent with funding agencies.

Contact: Dr. A. Desmond O'Rourke, Director, 509/335-6653

Economic Development Coordination Project for Whatcom Co.
Western Washington University

Description: *Goals*—To improve countywide coordinated economic development activities. *Activities*—Coordinates representatives from independent organizations to improve coordination of economic development efforts. Involve participants in three activities: (1) identifying general goals, (2) developing strategies to address the goals, (3) integrating the strategies into a coherent plan and agenda for economic development. *Audience*—Managers and board members of public and quasipublic organizations involved in economic development. *Innovations*—An organizational development approach used, that is, the decisions and consideration were driven by participants (i.e., managers) in the program. Used a computer-assisted group decision support system to assist in generating and evaluating alternate courses of action, potential blockages, and ways of overcoming blockage. Developed a locally based model of the structure of economic development activities to aid in planning and coordinated management.

Structure: *Staffing*—Assistant professor of management, associate professor of accounting, graduate assistant. *Funding*—University. *Program Evaluation*—Plan on using a formative approach to evaluation. Specific criteria will be the attainment of objectives generated by participants by the spring of 1988.

Products: *Publications*—"Coordination of Economic Development in Whatcom County" (technical report).

Future Plans: Continue making joint presentations of the results of the project to organization boards and constituencies with study participants. Consider conducting a second planning cycle as a result of the formative evaluation in conjunction with program managers.

Advice: Garner high-level support in the community. Be willing to tolerate ambiguity, as the issues take time to settle. In involving participants from different constituencies, give thoughtful consideration to "turf" issues. (The university can serve as a helpful mechanism in addressing this concern.)

Contact: Dr. Joseph E. Garcia, 206/676-3916

Shannon Point Marine Center (SPMC)
Western Washington University

Description: *Goals*—To enhance educational opportunities for students and research opportunities for faculty in the marine sciences. To attract to the university active research scientists who will use the center to promote their own research and contribute to the university's marine science program. *Activities*—Supports undergraduate and graduate education courses at WWU, including a quarter-in-residence and a summer undergraduate research program. Contributes space, ship time, and other resources to WWU faculty and graduate students. Recruits expertise of marine scientists from around the world by supporting visits to the facility by faculty on sabbatical leave, brief visits by distinguished faculty to offer workshops in their area of expertise, and by providing lab space to visitors. *Audience*—WWU academic community and the international marine science community. *Innovations*—Provides facilities and resources in a region that is of great interest to the marine science community, but in which there are limited opportunities for study. Encourages research and graduate education while maintaining an active role for undergraduates.

Structure: *Staffing*—Director, operations manager, secretary, marine technologist, maintenance mechanic. *Advisory Board*—Consortium Committee of four members. WWU Marine Science Coordinating Committee of ten members. *Funding*—Direct university support for facilities and basic program, consortium fees, lab and research vessel fees, research grants. *Program Evaluation*—Level of productive activity on site at the laboratory, including courses, number of graduate theses supported, WWU faculty research and number of visiting scientists.

Products: *Publications*—Publications generated by individuals visiting SPMC, not by program itself.

Future Plans: Continue development of marine science graduate curricula and faculty research at WWU. Increase frequency of visits to SPMC by visiting research scientists. Upgrade facilities, particularly in instrumentation and space.

Advice: Determine the need for resources of this type in the region. Ensure proper financial support to develop program to desired level. Work to maintain a productive relationship with the home institution.

Contact: Stephen D. Sulkin, Professor and Director, 206/293-2188

Wisconsin

Office of Business Outreach

University of Wisconsin-La Crosse

Description: *Goals*—To provide continuing educational opportunities for individuals who have already assumed management positions in local businesses to enable them to become better managers. To provide educational opportunities for aspiring entrepreneurs to help them reach their goals. *Activities*—Identifies the continuing educational needs of local business management personnel through both formal and informal survey techniques. Plans and implements workshops, seminars, and short courses. Identifies and organizes the faculty and other instructional resources necessary to implement these activities. Evaluates the seminars and workshops presented. Designs brochures and ads to promote these activities. *Audience*—Mainly persons holding managerial positions in regional businesses who wish to improve their management ability. Other professionals, such as insurance salespersons and real estate brokers, who need continuing education.

Structure: *Staffing*—Program coordinator, clerical, program assistant. *Advisory Board*—Five members. *Funding*—University extension budget, fees charged to seminar participants. *Program Evaluation*—Amount of program revenue raised as compared to the goal, feedback from seminar participants, number of participants.

Products: *Publications*—Program manuals.

Future Plans: Expand the number of workshops and seminars offered, and involve a greater number of faculty in the program.

Contact: Gordon S. Sanford, Coordinator, 608/785-8648

Projects With Industry (PWI)

University of Wisconsin-Stout

Description: *Goals*—To place persons with a disability into competitive employment positions consistent with their skills and abilities. *Activities*—The two major thrusts at PWI are job development and employer/employee training. Places disabled job seekers into competitive employment positions. Trains persons in effective job-seeking techniques. Sponsors and cosponsors training programs in such areas as injury management, return-to-work strategies, and affirmative action. *Audience*—Local employment community and the disabled. *Innovations*—Involvement of the private sector in the delivery of program services. An advisory council of area business representatives provides ongoing guidance.

Structure: *Staffing*—Five job placement specialists, two training specialists, two clerical staff, director. *Advisory Board*—Seventeen-members. *Funding*—Federal, state, and local grants, fees for services. *Program Evaluation*—Qualitative and quantitative measures used. Specific information gathered on placements accomplished, employers served, training activities, dollars generated, etc.

Products: *Publications—Job Seeking Skills Workbook.* "Annual PWI Performance Review."

Future Plans: Continue growth of existing services. Generate more fees to obtain more solid funding base. Provide services to traumatic brain injury clients. Increased cooperative activity with public schools.

Contact: Dave Swan, Director, 715/232-1419

Stout Economic and Technical Assistance Center

University of Wisconsin-Stout

Description: *Goals*—To link economic development agencies in the northern two-thirds of the State of Wisconsin. To help people in agencies find valuable economic development data and news. *Activities*—Serves as a clearinghouse. Publishes a monthly economic development newletter. Provides training to economic development agencies. Currently developing a telecommunications data base. *Audience*—Economic development agencies. *Innovations*—Apparently the only attempt in the state to link economic development agencies. Newsletters, telecommunications data bases, advisory committee meetings to bring the agencies together and share knowledge and information.

Structure: *Staffing*—Executive director, director, computer specialist, publisher/editor, adjunct marketing specialist, two secretaries and four graduate assistants. *Advisory Board*—Thirteen members. *Funding*—Primarily EDA funds, matching support from UW-Extension and UW-Stout. *Program Evaluation*—Input from advisory committee as well as formal evaluation of training sessions.

Products: *Publications—Economic Development News* (monthly newsletter).

Future Plans: Continue to expand telecommunications data base, newletters, and agency training sessions. Work with economic development agencies to sponsor a Northern Wisconsin Venture Capital Fair, and begin researching economic opportunity for Wisconsin.

Advice: Be careful not to duplicate current agency services. Develop a strong advisory committee.

Contact: Bruce Siebold, Director, 715/232-1251

Category D

Specific Services to a General Audience

Programs offering one kind of economic development assistance to a broadly defined or general audience—for example, consulting on a variety of subjects for any client, networking or partnership formation, seminars, or workshops for the general business community.

Alabama

Center for Economic Development and Business Research
Jacksonville State University

Description—To promote economic growth and the continuing development of a business environment that fosters the creation of jobs, investment, and expansion of Alabama's industrial base. *Activities*—Assists public-sector clients (cities, counties, planning agencies, gas districts, and other quasipublic agencies) through strategic plans, consumer opinion surveys, industrial "best-fit" analyses, feasibility studies, financial analyses, labor analysis, postsecondary education needs surveys. Assists private-sector clients through business counseling, computer technical assistance, data-base files for research expertise, market research production management, labor analysis, transporting studies, supervisory training, marketing strategies, economic forecasting, and employee attitude surveys. *Audience*—Government entities (cities, counties, planning agencies, gas districts, other quasipublic agencies), private business and industry. *Innovations*—Research done (generally) by faculty and staff of the university. Familiarizes the community with resources available at the university; enables the faculty to use their expertise in actual business situations as opposed to strictly academic application; this in turn provides university students with instructors who have academic as well as applied expertise in their field of study.

Structure: *Staffing*—One director, research analyst, three business consultants, three secretaries. *Funding*—Line item appropriation from the state legislature, some income from fees for full cost reimbursement of research and technical assistance. *Program Evaluation*—Increase in the creation of new jobs in a community and state, the economic stability and growth of a community realized from using existing resources as well as from exploring and developing new industry.

Products: *Publications*—Economic base studies for the following counties: Calhoun, Clay, Coosa, St. Clair, Talladega, Cleburne, Cherokee, and Randolph (Alabama). "Economic Impact of Jacksonville State University on Calhoun and Etowah Counties." "Economic Impact of Alabama Institute for Deaf and Blind on Talladega County." *Awards and Recognition*—Second place in National Association of Management Technical Assistance Centers (NAMTAC) 1986 Project of the Year Award for Economic Development Assistance.

Future Plans: Increase emphasis on small communities and rural economic development.

Advice: Hire outgoing individuals with entrepreneurial abilities and appropriate academic credentials (not necessarily Ph.D.s). Promote program thoroughly within service area. Do not try to sell what you cannot produce.

Contact: Pat W. Shaddix, Director, 205/231-5324

Center for Business and Economic Services
Livingston University

Description: *Goals*—To provide support to the businesses and government organizations in the Livingston University service area through contract research and service activities. *Activities*—Activities recently completed include an economic adjustment strategy for Sumter County, AL, which was presented to EDA; a stress management workshop for managers of Chemical Waste Management, Inc.; a report of Sumter County's strengths and weaknesses with respect to the Superconducting Super Collider Project; an economic impact analysis of Chemical Waste Management, Inc.; and a tourism survey for Demopolis, AL. Current activities include a marketing research study for a Livingston area grocer and an impact study of Livingston University. *Audience*—Businesses and government entities in the Livingston University service area.

Structure: *Staffing*—Part-time director, faculty from the college of business on a contract basis for individual projects. *Funding*—Contracts received. Small amount of income generated. *Program Evaluation*—Individual projects evaluated based on the feedback from the contracting business/organization and others using the information. Project deemed successful if it accomplishes the purpose for which it was intended.

Products: *Publications*—"An Analysis of the Economic Impact of Chemical Waste Management, Inc. and Enrac, Inc. on the Regional Economy of West Alabama and East Mississippi." "Economic Adjustment Strategy: Sumter County, Alabama." "Sumter County, Alabama, and the Superconducting Super Collider: A First Rate Partnership."

Future Plans: Continue to seek and perform contract services as requested.

Contact: Mrs. Pat Eisenbeis, Director, 205/652-9661 x439

The Center for Business and Economic Services
Troy State University

Description: *Goals*—To improve the operation of businesses and government units in Alabama through research and service activities. *Activities*—Provides research services in various projects in the field of business and public agency or community growth and development. Examples include image studies of businesses or institutions, studies of school bus routing for local systems, and census of cities and political units. Conducts political polls and market feasibility studies for many entrepreneurs. Offers seminars, workshops and institutes on various subjects to the general public and specific groups. *Audience*—Business and government units in the state, some organizations in neighboring states. *Innovations*—Statistically advanced methods used for gathering research data and surveying to ensure accurate data or unbiased samples. Training programs can be tailored to specific groups. College students often used in research, receive college credit as an incentive.

Structure: *Staffing*—Director, associate director, research professor of business and economics, clients coordinator, operations manager, senior research assistant, secretary. *Funding*—The State of Alabama, federal government, private contracts. Program income used to expand current and implement new programs as well as to update technological support. *Program Evaluation*—Ongoing evaluation of all programs conducted by staff members, special programs evaluated by attendees.

Products: *Publications—Troy State University Business and Economic Review* (quarterly).

Future Plans: Expand services to provide more support to the regional community and Alabama. (These include training programs for minorities and professional groups.) Aid in preparing college students to enter the work force.

Advice: Garner support from the surrounding community. Hire a dedicated, experienced staff. Use publicity and promotions to spread the good word.

Contact: Joseph W. Creek, Director, 205/566-3000 x144

Arizona

Outlook on the Mexican Economy
Arizona State University

Description: *Goals*—To provide the Arizona business community with expert assessment of Mexican business opportunities and the Mexican economic outlook. *Activities*—Center for Latin American Studies offers a series of economic outlook seminars on the Mexican economy, using expert speakers from both the U.S.A. and Mexico. *Audience*—Arizona business community, local and state officials.

Structure: *Advisory Board*—Twelve members. *Funding*—State and private-sector grants.

Contact: Jerry R. Ladman Ph.D., Director, Center for Latin American, 602/965-5127

Solid State Research Collaboration
Arizona State University

Description: *Goals*—To facilitate interdisciplinary collaboration in solid state research. *Activities*—Coordinates interdisciplinary research by chemists, engineers, geologists and physicists. Administers program for Ph.D. in Science and Engineering of Materials. Program focuses on the structure of advanced new and existing materials, relation of the structure of the materials to their properties, and the ability to synthesize and process materials that have desired properties. *Audience*—Graduate students, postdoctoral fellows, faculty and research staff. *Innovations*—The largest facility in the center, the High Resolution Electron Microscope Facility, is a National Science Foundation center for advanced electron microscopy research and applications to the study of inorganic materials. A broad range of other laboratories are part of the Center for Solid State Science, including materials synthesis laboratories, EPR, NMR, RAMAN, and X-ray spectroscopy laboratories, mechanical properties research laboratories, and others.

Structure: *Staffing*—Approximately fifty-one affiliated faculty (including four appointed), twelve research professionals and technicians, three office staff, postdoctoral fellows and students. *Advisory Board*—Executive committee of elected representatives of the departments and CSSS. *Funding*—State, federal grants, several private contracts. *Program Evaluation*—Faculty and staff from this program speak at national and international conferences and present invited talks at other universities, national laboratories, and various related industries. They also publish books and refereed papers.

Products: *Publications*—Many, including articles and books. *Awards and Recognition*—Award for E.I. duPont deNemours Committee on Education Aid in recognition of contributions to electron microscopy and materials research. ALCOA Distinguished Research Award for 1987, in recognition of contributions to materials research in the United States.

Future Plans: Promote focused research on materials problems.

Contact: Nancy L. Higgins, Business Manager, 602/965-4546

Arkansas

Small Business Institute
Southern Arkansas University

Description: *Goals*—To perform a community service by providing free business consulting to small businesses. To give students practical experience in dealing with problems in a real business environment. To give students more understanding about the workings of the Small Business Administration. *Activities*—Each school semester, SAU students work with small businesses in the area. They analyze the businesses' finances, management, and marketing to locate problems and make recommendations for better management. They then write reports on their findings, which are given to the business owner, the SBA, and the SBI coordinator. *Audience*—Small business owners/managers and college students. *Innovations*—Program sponsored by the SBA whereby businesses receive free consulting and students receive hands-on experience to supplement their classroom activities.

Structure: *Staffing*—Coordinator, twelve faculty members, approximately fifteen students a year. *Funding*—Small Business Administration. *Program Evaluation*—Follow-up interviews conducted by the Small Business Administration Staff. Criteria: increases in efficiency and/or profit of business as a result of the service.

Products: *Awards and Recognition*—Outstanding SBI case in the state, 1986. Number two SBI case in the state, 1987.

Future Plans: Continue to provide business consulting through the students.

Advice: Consider SBI as a good way to serve the business community while providing a learning experience to students.

Contact: Dr. Anna R. Trexler, Coordinator, 501/235-4313

Agricultural Experiment Station
University of Arkansas at Fayetteville

Description: *Goals*—To conduct research to enhance the economic development of agriculture in Arkansas. *Activities*—Conducts research to promote agricultural development including pest management programs in rice, cotton, soybeans, etc., plant breeding program for new varieties, and poultry research program, which has led to a $1.6 billion poultry industry in the state. *Audience*—Residents of Arkansas as well as the world. *Innovations*—The land-grant system of research.

Structure: *Staffing*—Approximately 150 research scientists plus support help. *Advisory Board*—Sixty members. *Funding*—Federal, state, and private income generated by sale of products. *Program Evaluation*—Numerous sucessful programs.

Products: *Publications*—Available at the Agricultural Publications Office. *Awards and Recognition*—Numerous faculty awards.

Future Plans: Maintain and enhance current research programs.

Contact: L. B. Daniels, Associate Director, 501/575-4446

Arkansas Center for Technology Transfer (ACTT)

University of Arkansas at Fayetteville

Description: *Goals*—To foster economic development in Arkansas through: (1) technology transfer using field engineering extension agents, (2) automation assistance through Robotics and Automation Center, (3) productivity enhancement assistance through Productivity Center, (4) industrial training from Center for Interactive Technology, (5) incubator program. *Activities*—Creates new jobs in new and existing industries, saves jobs, provides engineering assistance. Helps generate new industry, incubates new companies. *Audience*—Small- to medium-sized or new companies lacking certain engineering know-how. *Innovations*—The Robotic and Automation Center has almost a million dollars' worth of robots, material handling equipment, programmable controllers, computers, and automatic guided vehicles to mock-up and demonstrate to prove automation before purchase by the industrial firm. Extensive use made of graduate students working under the direction of staff and professors.

Structure: *Staffing*—Full-time professor directing ACTT. Research associate directing Robotics and Automation Center, four graduate students. Two field engineering extension agents in the state. One professor heading Productivity Center. One research associate and one research assistant creating interactive video/computer training programs. Part-time programmers as needed. *Funding*—State legislature grant, Robotics and Automation memberships, funded research grants. *Program Evaluation*—Jobs created or retained, engineering assistance to improve productivity, efficiency and quality, new markets or products developed, continued funding from the state.

Products: *Publications*—Simulation of a multiproduct conveying line, presented at National Industrial Engineering Annual Conference. Patent application on tactile sensing device. *Awards and Recognition*—Letters of thanks from assisted companies, chambers of commerce and regional planning and development agencies.

Future Plans: Assist companies to obtain SBIR grants. Alert companies of RFPs solicited in the Business and Commerce Daily. Initiate more incubators.

Advice: Use graduate students heavily—it gives them good experience and holds costs down. Explore needs in industrial engineering, mechanical engineering, computer science, industrial training in safety, handling toxic materials, and job training. Find ways to reward inventors in universities and those outside.

Contact: William H. Rader, Director, 501/575-3747

California

Economic Research Institute (ERI)

Humboldt State University

Description: *Goals*—To conduct continuous research and maintain current information on the California North Coast economy. To conduct special studies from time to time to provide a reliable source of information useful in addressing questions of public policy and other matters related to the maintenance of a healthy and growing economy in the region. *Activities*—"The Impact of Timber Harvest Levels on the Economies of Del Norte, Humboldt and Trinity Counties, California," ERI/SR87-1 econometric model constructed to allow evaluation of the impact alternative national forest management plans on major economic variables of the three-county region. "Economic Interactions of the Pulp Industry in Humboldt County" ERI/SR87-2 econometric model to be integrated with ERI/SR87-1 affording detailed representation of pulp industry interactions. *Audience*—General voting public and public policy officials of the region and state.

Structure: *Staffing*—Variable depending on subject of analysis, but generally drawn from economic and business faculty and members of the concerned economic activities. *Advisory Board*—Eight-member Board of Governors drawn from broad community interests and chaired by the Dean of the college of business and technology. *Funding*—Business-sector contributions, public-sector grants. *Program Evaluation*—Use made of the analyses by participants in public-policy discussions. Continuance and broadening of financial support by regional commercial interests. Continuance and broadening of faculty analytical involvement.

Products: *Publications*—"The Impact of Timber Harvest Levels on the Economies of Del Norte, Humboldt, and Trinity Counties, California." "Economic Interactions of the Pulp Industry in Humboldt County," "The Economic Data Base of the Humboldt County Region."

Future Plans: Continue and expand substantive research activities and their influence on regional economic policy formation.

Contact: Dr. John Grobey, Liaison Representative, 707/826-3347

Colorado

Extended Studies Program
University of Southern Colorado

Description: *Goals*—To provide access to adult learning in the work force of Pueblo's Industrial Park. *Activities*—Provides core courses leading to a four-year degree at the industrial sites. Provides in-state tuition for employees transferring from out of state. Provides workshops, seminars, and student support service at the job site. Assists local economic development efforts with incentive packages that include includes university sponsors and services. *Audience*—Businesses relocating to Pueblo, relocating firms, employees of those firms. *Innovations*—Course schedules structured that are conducive to several firms located in the vicinity. At least three educational sites established for the benefit of employees working various shifts. Downtown educational site for persons desiring to take course work during the noon hour.

Structure: *Staffing*—Two professionals, one secretary. *Advisory Board*—Being formed with representatives from various industries being served. *Funding*—Self-maintaining through tuition severance only. Industry provides space. University provides instructors. Industry also provides various tuition assistance plans.

Future Plans: Expand the program and add various internships. Persuade industry to participate in instructional collaboration efforts as a tax incentive. Coordinate more research collaboration between industry and the university.

Advice: Foster good communication. Present solid concepts to industry. Let business know what you have to offer. (After all, you are a service provider). Don't let industry get ahead of you in the educational game.

Contact: D. Luis G. Valerio, Dean, Extended Studies, 303/549-2100

Florida

Division of Continuing Education
Florida Atlantic University

Description: *Goals*—To serve as a link between business and industry. *Activities*—University offers a wide variety of educational programs needed by business professionals in the community. Training programs may consist of credit and noncredit programs. Noncredit courses offered as either open enrollment courses where participants enroll from many different organizations and agencies, or as contract programs where participants enroll from only one organization. Credit programs offered for special groups of professionals on a contract basis. Some current professional development programs: Entrepreneurship Forum, IBM Employee Training, Construction Cost Estimating and Bidding, Construction Project Management.

Contact: Melvin E. Hall, Dean, 305/393-3090

Center for Labor Research and Studies
Florida International University

Description: *Goals*—To provide educational and informational resources to workers and their organizations throughout Florida. *Activities*—Offers ongoing labor education courses; conferences, short courses, and workshops in areas of concern to local and international unions; research; and access to a resource center dealing with union administration and collective bargaining issues.

Contact: Linda Harris, 904/487-2061 or 305/554-2371

Center for Financial Analysis
Florida State University

Description: *Activities*—To provide research, training and service to individuals, corporations, and not-for-profit organizations in the areas of financial and investment decision making. Provides the dissemination and application of allied research findings and expertise to practitioners engaged in business and managerial activities. Utilizes decision support systems that interface with the FSU mainframe computers, allowing for the complex financial modeling and analysis that are required.

Contact: Dr. Donald Nast, 904/644-4220

Florida Economic Forecasting Center
Florida State University

Description: *Activities*—Provides forecasts of economic trends and conditions as they affect Florida and the region.

Contact: Dr. Charles Rockwood, 904/644-5001

Center for Personnel and Industrial Relations Research
Florida State University

Description: *Goals*—To provide research and technical assistance for primarily small to medium-sized firms in Florida in the areas of personnel management and industrial relations. *Activities*—Provides training and development programs to firms in personnel and related topics. The center helps business firms adapt to the social, legal, and economic changes in society through research into new and more effective techniques of personnel management.

Contact: Dr. William Anthony, 904/644-5505

Management Institute
University of Central Florida

Description: *Activities*—Coordinates the continuing education activities of the college of business administration and serves as a major resource for quality, university-level business and management education for individuals and organizations.

Contact: Linda Harris, Office of Public Affairs, Florida Board of Regents, 904/487-2061

Engineering and Industrial Experiment Station
University of Central Florida

Description: *Goals*—To foster industrial development in Florida. *Activities*—Awards small grants to faculty to help them develop research opportunities and projects of benefit to the state.

Contact: Linda Harris, Office of Public Affairs, Florida Board of Regents, 904/487-2061

Center for International Economic and Business Studies
University of Florida

Description: *Goals*—To operate a comprehensive, long-range research program that produces reliable business statistics and a continuing analysis of the changing economy and business conditions of Florida.

Contact: Linda Harris, 904/487-2061

Center for Economic and Business Research
University of North Florida

Description: *Activities*—Serves the business community with economic indicators and indices, specialized economic and business studies, a community hotline for important area business statistics, and periodic conferences and publications. Has produced a quarterly "Northeast Florida Business Barometer," a statistically acceptable stock index for northeastern Florida, a basic set of data bases for the region, and one or more Economic Outlook conferences.

Contact: Linda Harris, Office of Public Affairs, Florida Board of Regents, 904/487-2061 or 646-2643

Bay Area Consortium for Business and Higher Education
University of South Florida

Description: *Goals*—To provide a combined effort by the higher education community and business and industry located in the seven-county Tampa Bay Area to support economic development. *Activities*—Matches the needs of area employers to resources available from consortium member schools. Staff serves as a broker in the development of specialized training and education programs for local employers by consortium schools. Conducts direct mail and informational advertising efforts. Sponsors seminars on topics of interest to both business and education communities. Serves as an advocate for close cooperation between employers and higher education. *Audience*—All employers in the seven-county Tampa Bay Area. *Innovations*—Consortium staff serves independently in support of member schools. This allows the consortium to maintain close ties with the business community and with all member schools. Acts as "ombudsman" for businesses seeking support and cooperation from this area's higher education community.

Structure: *Staffing*—Executive director, staff assistant.

Contact: Michael S. Kelly, Executive Director, 813/875-0241

Center for Economic and Management Research
University of South Florida

Description: *Activities*—Disseminates information, provides consultation, and performs research on demographic, economic, business, and public policy issues. Makes publications, seminars, contractual consulting, and research services available to local businesses as well as federal, state, and local public agencies.

Contact: Joseph DeSalvo, 813/974-4266

Centers for Engineering Development and Research
University of South Florida

Description: *Goals*—To provide a mechanism for conducting joint research with industry, and to make faculty expertise available to local industry.

Contact: Thomas E. Wade, 813/974-3786

Institute for Information Systems Management
University of South Florida

Description: *Goals*—To operate a partnership between business, government, and higher education to establish a major center for research, education, and professional networking that will help firms to operate effectively in the information age. *Activities*—Each year, presents numerous seminars, workshops, and roundtable discussions on important issues in information systems management. Conducts applied research on topics of interest to corporate affiliates.

Contact: John S. Hodgson, 813/974-2001

Professional Development Center
University of South Florida

Description: *Goals*—To help business, industry, and government keep in touch with the changes and challenges of the economic and business environment through workshops, conferences, seminars, and short courses designed to help update skills, improve job performance, broaden perspectives, and increase personal effectiveness. *Activities*—Offers carefully planned, practical, and accessible programs in management development and professional education to all interested individuals in the USF service area. One example is the Florida Basic Economic Development Course, a high-quality, weeklong course covering economic fundamentals that meet AEDC criteria for continued accreditation. Another example is a workshop entitled, "The Economic Development Voluteer: Key to Your Community's Success." This was a one-day workshop cosponsored by the Florida Economic Development Council and the Tampa Bay Consortium for Business and Higher Education. In addition to these regularly scheduled short courses, seminars, and workshops, the center works with individual firms and organizations to provide inhouse training and specialized educational opportunities.

Audience—Professionals and volunteers in economic development.

Structure: *Advisory Board*—Five members. *Funding*—Collected fees for workshops and courses. *Program Evaluation*—Formal evaluation of all courses and workshops.

Future Plans: Attempt to secure USAID funding to develop similar programs in Caribbean Basin. Offer additional volunteer programs addressing each of FEDC's six regions once each year.

Advice: Work with several cosponsors to reach high-potential attendees. Keep fees as low as possible. Try to get speakers who are entertaining and who can talk about complex issues in a layperson's terms.

Contact: Maryanne M. Rouse, Director, 813/974-4264

Georgia

Regional Economics Center
Columbus College

Description: *Goals*—To develop demographic and economic data for the Columbus College service area. To offer programs and service to the community in the interest of economic development. *Activities*—Convenes the Economic Forecast Conference, conducts special studies for chambers of commerce, businesses, and others, offers faculty presentations to interested groups, operates Economic Education Program for school teachers. *Audience*—Any individuals or groups interested in economic development. *Innovations*—Computerized data loan being developed. Close coordination with the business community.

Structure: *Staffing*—Faculty, part-time, a full-time staff is planned. *Funding*—Business school budget, no income is generated. *Program Evaluation*—Not yet formalized.

Future Plans: Become a separate unit with a director and other staff. Coordinate and expand the work now being done by individual faculty to meet the expressed needs of the region.

Contact: William J. Arthur, Dean, School of Business, 404/568-2044

Illinois

Business Research Center
Southern Illinois University at Carbondale

Description: *Goals*—To conduct applied business/economic research studies for diverse clientele. To develop, maintain, and publish reports on the southern Illinois economic data base. *Activities*—Administered through the college of business and administration as part of service activities. Prepares/distributes quarterly reports on labor economics for southern Illinois counties. Prepares reports to meet special needs of small business firms and other groups in southern Illinois. Prepares reports on analysis of business conditions for southern Illinois selected counties. *Audience*—Public and high school libraries in the southern Illinois counties, regional planning commissions, mayors, city officials, SIUC departments and units, Small Business Development Center clients. *Innovations*—Quarterlies distributed through the Shawnee Library System to 340 public libraries and to high schools and community college learning centers in thirty-four southern Illinois counties.

Structure: *Staffing*—Director, graduate/research assistant, secretary. *Advisory Board* —Dean, College of Business Administration (COBA); Director, Small Business Development Center (SBDC); Director, Business Research Center (BRC). *Funding*—College of Business and Administration, SBDC, Illinois Department of Commerce and Community Affairs. *Program Evaluation*—Informal feedback provided by dean of college of business and administration and SBDC Director. Summary of proposed activities prepared each semester for the dean.

Products: *Publications*—Many.

Future Plans: Locate housing in the Southern Illinois Small Business Incubator facility planned for 1989 opening.

Contact: Donald Vaughn, Director, 618/536-2424

Center for Managerial and Executive Development
Southern Illinois University at Carbondale

Description: *Goals*—To develop and offer seminars and workshops on business topics for executives and inhouse training programs for business people. Seminars produced and presented in coordination with the Division of Continuing Education and Small Business Development Center. Seminars serve the business community, but also provide additional funding for the college. *Activities*—CPA Review Program provided preparation for CPA exam for students. Computer seminars, consisting of as many as eight sessions, assist people in the use of microcomputers for business applications. The Human Resource Planning and Development Seminar at the Singapore Institute of Management provided information to managers and executives. Professional development courses offered to area CPAs to provide the professional continuing education necessary to the maintenance of their credentials. Week-long executive seminar being developed for CEOs of organizations who are members of the American Supply Association. A seminar, "What Your Employees Don't Know Can Hurt You," is planned. *Audience*—Southern Illinois business managers and executives.

Structure: *Staffing*—Director. *Advisory Board*—Fifteen members. *Funding*—Director's salary paid by division of continuing education. Operational costs covered by the college of business and administration. Net program income divided between the two units. Center designed to recover costs (salaries and operational costs) within three years. *Program Evaluation*—Number of seminar participants (particularly the number of participants at managerial and executive levels), ability of the program to cover costs, informal feedback from the dean of the college of business and administration and the director of the division of continuing education.

Future Plans: Extend service to major cities nationwide and to the Pacific Rim countries.

Advice: Be aware that it is difficult to implement an executive development program in a rural location because of the low population density and low number of large businesses.

Contact: David Orr, Director, 618/453-3328

College of Engineering and Technology Applied Research Center
Southern Illinois University at Carbondale

Description: *Goals*—To coordinate the college's outreach programs with industries. To establish applied research activities of faculty and students. To furnish technical consultations in solving practical and industrial problems. *Activities*—Develops projects involving local companies, student interns, and faculty consultants. *Audience*—Small and large southern Illinois businesses (specifically manufacturing companies), college faculty, student interns. *Innovations*—Student interns frequently used to provide technical assistance, offering the companies practical solutions at reasonable costs while providing learning opportunities for the students.

Structure: *Staffing*—Dean, college of engineering and technology, CETARC director, secretary. *Funding*—Faculty consulting fees from the companies. Student interns also paid directly by the companies. Some projects assumed on a no-charge basis, and students perform the work for college credit only. The Technology Commercialization Center's industrial clients also receive some technical assistance through CETARC for which they reimburse CETARC. *Program Evaluation*—Number of faculty and students who received practical experience through hands-on work, number of companies served.

Products: *Publications*—Cocontributor to *Connections* (monthly newsletter), journal.

Future Plans: Develop a state-of-the-art technology conference to inform southern Illinois businesses about CETARC's capabilities and services.

Contact: Fred Myers, CETARC Director, 618/536-3396

Rural Development Center
Southern Illinois University at Carbondale

Description: *Goals*—To stimulate, support, conduct, and disseminate interdisciplinary research on the socioeconomic structure of rural areas. To evaluate the ability of indigenous resources and institutions to effect economic development of rural areas (particularly southern Illinois) within the context of changing national and international economies. To establish baseline indicators of economic activity in southern Illinois, to develop a methodology for assessing the effect of locating of a major manufacturing facility in a rural community, and to develop a statistical model to estimate the probability of attracting a business or establishment with certain resource requirements. *Activities*—Assesses the effect of the farm economy on the economic fortunes of rural communities. Compares competitive economic sectors in southern Illinois to those in the rest of the state. Conducting study of the rural community's economic benefits and costs in attracting a major manufacturing facility. Developing statistical model to assess the relationships among economic, political, and institutional factors affecting the economic development prospects of rural communities. *Audience*—Research activities pertinent to local community groups, planning agencies, extension units, and university service units, which design and implement economic development programs and activities in rural communities.

Structure: *Staffing*—Director, co-principal investigators, graduate assistant, secretary. *Funding*—SIUC graduate school, school of agriculture and college of liberal arts. Additional funding anticipated from grants. *Program Evaluation*—Number of presentations (professional, academic, and community), published papers and reports, funds generated through grants, number of participants in workshops and seminars.

Products: *Publications*—Several, some pending.

Future Plans: Develop a procedure for assessing benefits and costs to a local community when attracting an industrial facility. Assess the relationship between local and community infrastructure development and probabilities of attracting targeted businesses.

Advice: Consider interdisciplinary approach which has many advantages—sharing of resources, broader base of expertise, shared collegiate responsibility and support.

Contact: Roger Beck, Assistant Professor, 618/453-2421

Executive Development Center
Western Illinois University

Description: *Goals*—To serve as outreach for the college of business by providing training, assistance, seminars, and short courses for business owners and managers in western Illinois. *Activities*—Presents seminars and workshops, involving faculty members in their presentation. Serves as the coordinating staff office for the Small Business Development Center, Technological Commercialization Center, and Great Rivers Corridor of Opportunity. *Audience*—Businesses, communities, health service organizations, government agencies, and other interested organizations located in West Central Illinois. *Innovations*—Cooperative relationships with other educational institutions throughout the region to deliver programming. Seminars have utilized faculty from different colleges within the university.

Structure: *Staffing*—Director, secretary, student assistants, other employees. *Funding*—State appropriated funds, revenues generated, external grants. *Program Evaluation*—Conducted by participants. Overall review performed annually by the dean of the college of business.

Future Plans: Explore cooperative relationships between component constituencies composing the West Central region of Illinois. Focus efforts on small-business problems and solutions.

Advice: Determine your own niche; don't simply copy what others have done. Find people who are willing to work and free them from bureaucratic rules that tend to limit productivity. Don't overlook the expertise and experience of people right on your own campus or in your immediate service area.

Contact: Dr. David Sprague, 309/298-1555

Kansas

Center for Technology Transfer
Pittsburg State University

Description: *Goals*—To provide assistance to Kansas regional industries through the development, introduction, and transfer of technology. To build nationally recognized programs within the school of technology and applied science, particularly those related to the woods and plastics industries, with a focus on design, testing, and development of products and processing methods. *Activities*—Supplies grants to university divisions, founds new businesses, and expands others. *Audience*—Industries in Kansas or new start-up firms establishing operations in Kansas. *Innovations*—Center can provide consulting on product development production planning and techniques and applied research in areas within the school of technology and applied science. Special emphasis in the areas of plastics, wood and printing, with strong support in mechanical design, electronics, and manufacturing, including CAD/CAM and robotics.

Structure: *Staffing*—Engage a full-time director who will coordinate the services of faculty members in the school of technology and applied science. *Advisory Board*—Twenty to twenty-three members. *Funding*—Industrial funds matched by the State of Kansas through Kansas Technology Enterprise Corporation (KTEC). *Program Evaluation*—No formal procedures. Judged by success rate of start-up firms, expansions, and new jobs created for Kansas workers.

Products: *Awards and Recognition*—Wood Technology division recognized as the National Wood Technology Center by Architectural Woodwork Institute (AWI) and three other wood industry associations.

Future Plans: Develop National Center for Forms Printing Industry.

Contact: Dr. F. Victor Sullivan, Dean, School of Technology and Applied Science, 316/231-7000 x4365

Mid-America, Inc., Certified Development Company

Pittsburg State University

Description: *Goals*—To create jobs in southeast Kansas and help businesses with financing. *Activities*—Develops loan packages for projects, helping to retain and create jobs. *Audience*—Small businesses in southeastern Kansas.

Structure: *Staffing*—Director, loan packager. *Advisory Board*—Mid-America, Inc., Board of Trustees, thirty-one members. *Funding*—Grant from the Kansas Department of Commerce, income from fees for packaging and servicing loans. *Program Evaluation*—Number of jobs created or retained, number of successful loan packages, dollar value of loan projects.

Future Plans: Increase the activity level threefold by expanding staffing.

Contact: David L. Ross, Director, 316/231-7000 x4920

Center for Economic Development and Business Research

Wichita State University

Description: *Goals*—To provide economic information for South Central Kansas. To compile, analyze, and disseminate economic data for the local area, Kansas, and the United States. *Activities*—Provides special reports and data for publication in a weekly newspaper. Conducts contract research for private and public enterprises on topics in business and economics. Conducts economic feasibility and development studies for private and public agencies. Provides one-on-one consultation with public and private individuals on various economic topics. *Audience*—General public, public and private enterprises requiring business and economic information. *Innovations*—Has developed a comprehensive data base consisting of over 600 times series. (An example is the retail sales time series data base for all 105 counties in Kansas). Can provide this information either in printed form or on a floppy disk for use by requesting clients. Staff can also provide analysis and interpretation. Has established a direct phone line service for the WI/SE Partnership for Growth, Inc., an organization affiliated with the Wichita Area Chamber of Commerce.

Structure: *Staffing*—Director, associate director, research associate, secretary, part-time editor, one or two graduate assistants on specific research projects. *Advisory Board*—Review board of five faculty members evaluates manuscripts for possible publication in the center's quarterly publication. *Funding*—State, contracts, subscription fees for publications. *Program Evaluation*—Level of activities performed; that is, number and value of external research contracts, circulation of various publications, number of clients served, quality of publications.

Products: *Publications*—Monthly data report entitled "Kansas Economic Indicators," journal entitled *Business and Economic Report,* individual reports.

Future Plans: Expand economic data bases statewide. Attain an expanded base of state financial support. Develop close working ties with the WI/SE Growth program to promote local and regional economic development.

Advice: Get substantial fuding up front. Establish a unique niche for your locale in terms of data bases. Develop a close relationship with prospective clientele.

Contact: Dennis C. Duell, Director, 316/689-3200

National Technological University Witchita Area Consortium

Wichita State University

Description: *Goals*—To enhance the graduate degree programs of Wichita State University in all areas of engineering and computer science. To deliver these programs both on campus and potentially onsite in area businesses and industries using a video delivery system. Using the consortium approach, to make these courses available to all area companies regardless of size and resources. *Activities*—With Wichita State University serving as the site coordinator, invites local companies to join the consortium to receive the course offerings of the institutional members of NTU. Shares the costs associated with the delivery system, enabling companies employing graduate engineers and computer scientists to afford to provide professional development for their work force, thereby increasing job and location satisfaction. *Audience*—Any business or industry in the area. *Innovations*—Using first a tape library system with a potential microwave delivery system to an on-site location, graduate programs will be available to a broad audience, which enhances university offerings.

Structure: *Staffing*—Being formed. *Advisory Board*—Being developed. *Funding*—An advance from Research and Sponsored Programs has enabled start-up. Program should become self-supporting. Companies taking part in the consortium will pay a membership fee and a surcharge based on the degree of participation of their employees. *Program Evaluation*—Number of students and companies participating.

Future Plans: Form a consortium with five new members each year until the needs for graduate education are met. Eventually, establish an area network to give students access to these courses at their work place.

Contact: Norma C. Gribble, Director of Academic Outreach, 316/689-3726

University/Community College/ Technical Institute Cooperative

Wichita State University

Description: *Goals*—To make the technical programs offered by community colleges and the Kansas Technical Institute available to persons employed in those fields in the Wichita area. To increase the skills of the area work force using the combined resources of the university, the community college, and the technical institute to meet employer needs. *Activities*—Technical specialty courses offered on the university campus by the two-year institutions. Other courses required for the associate degree taken at the university. Associate degree awarded by the two-year institution. Transfer articulation of the associate degree into a four-year degree outlined before the start of the program to enable students to do long-range planning. *Audience*—Students who wish to enroll in technical programs who are unable to travel to other locations to learn or update their skills. *Innovations*—Specialty courses of the "visiting" institutions offered on the university campus using university resources.

Structure: *Staffing*—Coordination of the programs comes from continuing education as part of their normal responsibilities. Registration and faculty support of the specialty courses come from the offering institution. *Advisory Board*—Members of the faculties involved from both two-year institutions and the university. *Funding*—No funds generated or expended beyond normal state funding for credit hours produced. *Program Evaluation*—Number of participants and the needs of the community that are met.

Future Plans: Assess community employer needs, and expand the types of technical programs offered to meet those needs.

Advice: In early discussions of a cooperative program, make certain that institutional commitment exists and that affected curricular areas have an opportunity for review. Identify one contact person from each institution. Develop a detailed agreement of responsibilities for all phases of the program to include marketing, room scheduling, registration, etc.

Contact: Norma C. Gribble, Director of Academic Outreach, 316/689-3726

Kentucky

Economic Development Center
Eastern Kentucky University

Description: *Goals*—To identify opportunities for university assistance in economic development. To identify and maintain a current list of applicable university resources. To facilitate proposals for funding projects. To acquire and share relevant information. *Activities*—Conducts surveys on university resources. Develops a network for economic development activities. Develops a local economic development information base. *Audience*—Local and state governments, area development districts, private businesses and industries.

Structure: *Staffing*—Director, secretary. *Advisory Board*—Ten members. *Funding*—University, outside contracts. *Program Evaluation*—Evaluated by the advisory board and the administration at the end of the calendar year, based on accomplishment of goals and objectives spelled out at the beginning of the year.

Future Plans: Future plans will be based on the results of the first year evaluation.

Contact: Dr. R. L. Marionneaux, Director, 606/622-6190

Aquaculture Research and Extention
Kentucky State University

Description: *Goals*—To research and develop aquaculture operations state wide, including large-scale commercial and small farm-based operations. *Activities*—Conducts research on the feeding of overwintered catfish and the effects of density and feeding method on winter trout production, early life history and fingerling production of channel catfish and paddlefish, summer production of channel and blue catfish and rainbow trout, assistance with site selection, production and harvesting techniques, water quality, and disease management, through site visits and community meetings. *Audience*—All individuals or commercial firms interested in aquaculture within the Commonwealth of Kentucky. *Innovations*—Aquaculture, as an alternative to traditional agriculture, is new to Kentucky farmers. Program unique in its approach to coordinating research and extension activities in promoting the development of aquaculture in Kentucky. Program is the only aquaculture research extension program in Kentucky.

Structure: *Staffing*—Principal investigator for Aquaculture, coinvestigator for aquaculture, aquaculture research assistant, aquaculture facilities manager, aquaculture extension specialist, aquaculture marketing principal investigator. *Funding*—USDA, small income from fish sales. *Program Evaluation*—Advancement of aquaculture production in Kentucky, both small-farm and large-scale production. Increased public awareness and interest in aquaculture in Kentucky. Increased interest and implementation of processing and marketing of aquaculture products in Kentucky. Publications, research and extension, on aquaculture practices in Kentucky.

Products: *Publications—Public Pay Fishing Opportunities in Kentucky. Pay Lakes as a Marketing Alternative for Kentucky Fish Producers. Kentucky Catfish and Trout Market Survey. Fishing in Kentucky.*

Future Plans: Expand efforts in aquaculture marketing. Continue research and extension efforts in production of catfish and trout. Research commercial usage of paddlefish and other alternative species. Conduct farm extension demonstrations on aquaculture and aquatic systems management.

Advice: Site selection and proper climatic conditions are essential in establishing an aquaculture facility. Select species suited to your climatic conditions and having known production and market potential. Coordinate the program with other research and extension programs and state fish and wildlife agencies.

Contact: Michael Masser, Aquaculture Specialist, 502/227-6581

Office of Training Services
Murray State University

Description: *Goals*—To serve as an "on-call" resource to business and industry in support of their training and related needs. *Activities*—Develops and implements a customized technical training program for Briggs and Stratton, develops training materials for the Kentucky Gas Association and the National LP-Gas Association. Develops a manual for use by vocational schools as a guide in setting up short-term upgrade training. Develops customized training for Fisher-Price. Develops instructor guides for teaching volunteer firefighters. *Audience*—Area business and industry and their employees. *Innovations*—Serves as an adjunct human resource development department to small industries. Maintains personnel and training resources available twenty-four hours a day on request. All programs customized to the identified training needs.

Structure: *Staffing*—Three technical writers/training facilitators, two-word processor operators, graphic artist/office manager. *Advisory Board*—Advisory boards associated with each project (number of members range from 10-18). *Funding*—With the exception of office space and custodial services, office is self-supporting. *Program Evaluation*—Based on client satisfaction and return business.

Products: *Publications*—Training modules related to specific training needs within a given company (not for public distribution).

Future Plans: Seek to serve more and varied industries. Establish a permanent bond between the university and the business and industry community.

Advice: Listen to the client.

Contact: Dr. Paul Lyons, Director, 502/762-6916

Center for Manufacturing Technology
Western Kentucky University

Description: *Goals*—To stimulate economic development by supporting the needs of new and existing industry in South Central Kentucky. To provide support in terms of upgrade training for management/supervisory personnel, research opportunities, and other related public-service activities needed by industry. *Activities*—Provides industries with advanced training programs through workshops on such topics as the applications of CAD-CAM, the use of programmable logic controllers, NC programming, statistical process control, and other aspects of automated manufacturing. Conducts research and provides public service as needed. Conducts studies on environmental safety (noise, air pollutants, water quality), quality assurance, and paint quality. *Audience*—Regional industry. *Innovations*—Activities offered on a "needs basis" using existing faculty expertise. Release time made available to participating faculty; in other instances, consulting fees charged for services rendered. Annual conference held on campus to showcase the latest developments in manufacturing.

Structure: *Staffing*—Director, work-study student, faculty. *Advisory Board*—Being formed. Will include members from regional industry and academic departments on campus, respective deans, and faculty who have participated in activities of the center. *Funding*—Normal faculty schedule; anticipated that the center will become self-sufficient in 3-5 years. *Program Evaluation*—Responsiveness to the needs of industry. Quality of services, speed of response, follow-up on center activities, amount of charges for services.

Future Plans: Develop a strong relationship with local chambers of commerce, area vocational schools, and regional industries to promote a community-wide effort toward economic development. Develop a method of constantly monitoring the needs of regional industry. Influence the integration of current technology into the undergraduate industrial technology program at Western. Help other institutions set up similar training, research, and service opportunities for industry in support of economic development.

Advice: Develop an industry/university partnership. Be flexible in working with industry. Promise only what you can deliver.

Contact: Dr. H. Terry Leeper, Director, 502/745-5950

Environmental Quality Lab
Western Kentucky University

Description: *Goals*—To provide analyses and testing of environmental samples for a fee—including water, waste water and air—for local industries, school systems, government units and local citizens. *Activities*—Analysis and testing for more than thirty different elements in drinking water, waste water and air samples. *Audience*—Regional industry, schools, government units, local citizens.

Structure: *Staffing*—Manager, two staff persons, 3-4 student assistants. *Funding*—Primarily self-supporting from the fees charged; university provides some funds as needed and available. *Program Evaluation*—Responsiveness to local needs, quality of service, speed of response, amount of charges for service.

Future Plans: Continue serving local customers within the financial constraints of the university.

Contact: Richard Walker, Manager, 502/745-5287

Louisiana

South Louisiana Economic Council
Nicholls State University

Description: *Goals*—To provide new jobs in four parish (county) area. *Activities*—Contacts out-of-state industrial and commercial prospects by mail, phone, visits, and magazine advertising. Contacts present industrial and commercial firms to explore expansion possibilities. *Audience*—Business and industry in the area. *Innovations*—One of the few (maybe the only) economic development organization(s) domiciled on a university campus in Louisiana.

Structure: *Staffing*—Director, executive secretary. *Advisory Board*—Thirteen-member executive board. *Funding*—Public and private. Does not generate income. *Program Evaluation*—Program operating only since January 1987—too early to measure outcomes. Criterion for success is new jobs created in the four parishes.

Future Plans: Produce brochures and videotapes.

Advice: Take advantage of the university location and tie-in.

Contact: John W. Foltz, Director, 504/448-4485

Acadiana Business Conditions Report
University of Southwestern Louisiana

Description: *Goals*—To collect, analyze, and disseminate management and marketing information from 100 businesses in an eight-parish region. *Activities*—Produces semiannual newsletter, news releases. *Audience*—Business community in eight southern Louisiana parishes. *Innovations*—Producing a report that is the first survey of management and marketing. As such, it attempts to gauge plans for expansion or cutbacks, hiring or layoffs, and business expectations.

Structure: *Staffing*—Two persons.

Contact: Dr. David Duhon, Associate Professor of Management, 318/231-6866

Lafayette Economics Indicators
University of Southwestern Louisiana

Description: *Goals*—To collect, analyze, and disseminate timely regional economic data for Lafayette and environs. *Activities*—Collects data on labor force, energy industry indicators, prices, financial institutions, and retail sales. Releases monthly after making seasonal adjustment. *Audience*—Business community and out-of-state investors. *Innovations*—Continual seasonal adjustment of monthly regional data is rarely done. Over the years, this has resulted in a large data base of monthly information used by the public at no charge.

Structure: *Staffing*—Dean, college of business administration.

Contact: Dr. David Manuel, Dean, College of Business Administration, 318/231-6491

USL Conference Center
University of Southwestern Louisiana

Description: *Goals*—To sponsor short courses and seminars for area professionals—particularly for the oil industry, business, medical, and environmental concerns. *Activities*—The university has renovated a former dormitory into a conference and continuing education facility. The building features many large meeting rooms, an indoor pool, and housing for those attending several-day courses.

The USL Petroleum Training Service has sponsored courses for some 30,000 oil industry personnel, on topics ranging from abnormal pressure detection to well control, to water safety. *Audience*—Continuing education students in professions. *Innovations*—Offered the first university-affiliated well control course that met guidelines set by the Minerals Management Service (formerly U.S. Geological Survey).

Structure: *Staffing*—Director. Contact: Dr. Louis Roth, 318/233-9350

Maine

Growth Management Center
University of Southern Maine

Description: *Goals*—To contribute to the formulation and implementation of public policy emerging as the result of rapid economic growth and change in southern Maine. *Activities*—Designs and implements training programs for municipal officials, in cooperation with the regional planning councils. conducts research agenda on affordable housing, public finance, and Portland's waterfront. Offers multidisciplinary course on growth management for professionals and local officials involved in planning. Manages broad public education program emphasizing participation in local government. *Audience*—Local officials, planning professionals, municipal attorneys, developers, general business community, citizens. *Innovations*—The project developing a broad base of participation and support through task forces assembled to advise and implement each initiative. Use of television for public education should allow reaching of the largest audience possible, informing the citizens of southern Maine about growth management issues. Project represents a cooperative effort among several university departments and programs.

Structure: *Staffing*—Co-directors, staff director, graduate assistant, consultants. *Advisory Board*—Twenty-four members. *Funding*—University system, Maine Savings Bank, the development community. *Program Evaluation*—Each activity will be evaluated individually through participant surveys; the entire project will be monitored and evaluated by the Advisory Committee in September 1988, and a recommendation made to the university about its future.

Products: *Publications*—Newspaper and newsletter articles.

Future Plans: Conduct evaluations to determine whether the project will continue and, if so, in what form.

Advice: Establish cooperative working relationships with community agencies and other departments in the university.

Contact: Stephen T. Honey, Co-Director, 207/780-4380

Maryland

Engineering Research Center
University of Maryland, College Park

Description: *Goals*—To promote interaction in engineering and science between the University of Maryland and the business and industrial community of the state. To assist Maryland industry in remaining competitive in today's technology-dominated environment, and to strengthen the university through collaboration with industry. *Activities*—Conducts four principal programs to further cooperation; Technology Advancement Program (TAP), a small business incubator that provides business and technical support for start-up companies; Technology Initiatives Program (TES), which provides on-site technical assistance to companies throughout the state from five regional offices; Technology Initiatives Program (TIP), which promotes development of research capabilities within the university in technical areas of industrial relevance and establishes programs of research between the university and industry; Maryland Industrial Partnerships Program (MIPS), which provides matching funds for joint industry university research in areas of importance to Maryland companies. *Audience*—Maryland businesses, large and small. *Innovations*—TAP program gives small companies access to many unique university facilities. TES provides a mechanism whereby faculty provide assistance to Maryland companies. MIPS offers Maryland firms an opportunity to increase the impact of their research investment.

Structure: *Staffing*—ERC employs approximately thirty people, mostly engineers in support of the above programs. Three are faculty appointments; remainder are associate staff positions. *Advisory Board*—College of Engineering Advisory Board. TAP has own advisory board consisting of ten members, MIPS has a sixteen-member board. *Funding*—University, state, additional funds generated. *Program Evaluation*—Each of the four programs has its own evaluation criteria. Relevant factors include contributions to state economic development and to the university.

Products: *Publications*—Laboratory data sheets, newsletters, reports, brochures.

Future Plans: Expand MIPS. Increase the number of companies in TAP.

Advice: Establish a program that matches local needs. Consider faculty interests in all undertakings. Obtain the support of key administrators.

Contact: Dr. Herbert Rabin, Director, 301/454-7941

Massachusetts

Landscape Architecture and Regional Planning
University of Massachusetts-Amherst

Description: *Activities*—Offers planning and design assistance on projects ranging in geographical scale from regional down to individual sites, with expertise in matters such as land use planning, growth management, economic development, resource planning, economic development planning, historic preservation, recreation planning, town design, arboriculture and urban forestry, and park, planting, and garden design. Special areas of involvement include the development of computer-based geographic information systems, computer modeling, computer-assisted planning procedures, and techniques for managing growth associated with decentralization. Services generally take the form of planning or design studies resulting in proposals and the generation of plan alternatives. *Audience*—State and federal agencies, municipalities, nonprofit organizations, developers.

Contact: Meir Gross, Department Head, 413/545-2255

Michigan

Industrial Development Institute (IDI)
Michigan State University

Description: *Goals*—To marshal university expertise and special facilities to retain and create new jobs through new business and industry starts. To improve the competitiveness of existing Michigan businesses and industries, especially auto supply manufacturing companies in Michigan. *Activities*—Provides clients assessments drawing from expertise in the following university departments and institutes: Composite Materials and Structures Center, Biotechnology Center, Food Industry Institute, Transportation and Tourism Center, School of Packaging, Industrial Psychology, and Department of Management. *Audience*—Michigan businesses and industries, new entrepreneurs, local economic development councils. *Innovations*—Access to IDI may be obtained through the Technology Transfer Network, which joins Michigan's four research universities and the State Department of Commerce. A technology center on any of the campuses can, by computer network, refer clients to most accessible expertise. State appropriation acquired for focusing areas of research excellence on state economic development activities.

Structure: *Staffing*—Two full-time professionals plus one support staff in IDI, assistant vice president for industry assistance. *Advisory Board*—Nine members. *Funding*—University general funds.

Future Plans: Expand scope of program and level of staff in response to growing market for services provided.

Advice: Ultimate success depends critically from the outset on the quality of the assistance provided and the credibility of the program director.

Contact: Michael Martin, Director, IDI, 517/355-0143

Business Research and Service Institute
Western Michigan University

Description: *Goals*—To act as the link between the business community and the WMU college of business for the training, consulting, business meetings, and conferences dealing with business and management-related issues. To provide programs and services that assist the business community in accomplishing its goals. *Activities*—Provides public seminars on management development topics to practicing managers in private and public sectors, with attendance of 20-100 participants per program. Provides custom training and consulting programs and services to business organizations, corporations, professional associations, and community groups. *Audience*—Business and industry professionals, and communities throughout western Michigan. *Innovations*—Utilizes a state-of-the-art conference center for the meetings and seminars. Features computer systems development and training for corporations utilizing a DEC VAX 11/750 and fourteen-station training lab.

Structure: *Staffing*—Executive director, manager, program and training services, manager of Computer Simulation Laboratory. *Advisory Board*—Being formed. Will consist of twelve members. *Funding*—Program and consulting fees. Expected to become self-supporting in 1988. *Program Evaluation*—Individual program evaluation forms, informal client input, and occasional surveys measuring client satisfaction, success in meeting program objectives, presenter style/quality, and individual expectations for programs.

Future Plans: Expand public, custom, and consulting activities by 50 percent in next three years. Provide financial assistance to the college of business through generation of surplus revenue. Increase number of public programs offered by 15 percent per year.

Advice: Deliver what you promise and promise what you deliver. Respond to your market rather than trying to create programs and then find a market. Listen to your clients.

Contact: Paul M. C. Knudstrup, 616/383-3232

Water Resources and Contaminant Hydrology
Western Michigan University

Description: *Goals*—To provide hydrologeological information that will facilitate decisions within the business community relative to site selection and plant expansion for the purpose of encouraging economic growth in southwestern Michigan. *Activities*—Research activities include delineation of ground-water recharge and discharge areas using hydrochemistry; laboratory and field studies of leaking underground storage tanks; classification and mapping of wetlands; aquifer vulnerability mapping; and surveys of businesses on water-related issues. Professional training seminars include "Constraints on Building in Wetlands and Managing Hazardous Wastes." Provides technical advice on land application of sludge, aquifer vulnerability mapping and the Supercolliding Super Conductor proposal for Michigan. *Audience*—Business and industry, government agencies, and others concerned with economic development in southwestern Michigan. *Innovations*—Training seminars for members of the business community on topics of current importance for which information is not generally available. Created an audiovisual self-learning center where members of the business community can independently acquire information on water resources and contamination. Developed a water quality analysis laboratory.

Structure: *Staffing*—Faculty-researchers, secretary, graduate assistants, water quality lab technician. *Advisory Board*—Twelve members. *Funding*—State of Michigan Research Excellence and Economic Development Fund, other funding from the university, grants, and consulting. *Program Evaluation*—Research publications, numbers of training seminars and participants, requests for information and assistance, additional funding, expansion of services, letters of appreciation. The real economic gains from activities are difficult to measure, especially over the short term.

Products: *Publications*—In progress: wetlands maps of three counties in southwestern Michigan, map of hydrologeological constraints on hazardous waste disposal in Michigan, groundwater in southwestern Michigan. *Awards and Recognition*—Director, appointed to Michigan Hazardous Waste Siting Board by the governor. Another professional invited by the U.S. Army Corp of Engineers and others to teach in wetlands short courses and invited to give papers on wetland technology.

Future Plans: Organize and undertake a study of the relationship between water resources and economics in southwestern Michigan, tentatively entitled "Southwest Michigan Water 2000." Help establish an Institute for Water Sciences at WMU. Expand research program.

Advice: Build on your strengths. Select programs related to important current issues. Obtain as much release time as possible for the faculty involved.

Contact: Dr. Richard N. Passero, Professor of Geology, 616/383-0067

WESTOPS
Western Michigan University

Description: *Goals*—To serve as the entry point for business and industry to access the resources of the university. *Activities*—Organized around an inquiry/response format. Fields client inquiries and locates the appropriate university resource to meet the respective inquiry. Conducts data base searches and links WMU with other Michigan universities. *Audience*—Primarily business and industry, others who contact the service. *Innovations*—Also functions as a Technology Transfer Center, linked to other institutions.

Structure: *Staffing*—Four full-time staff. *Advisory Board*—Consists of three university vice presidents. *Funding*—Matching funds arrangement between the state and the university. *Program Evaluation*—Clients surveyed at random with a follow-up questionnaire.

Products: *Publications*—Many.

Future Plans: Extend the program to all Michigan universities.

Advice: Don't put a lot of effort into a sophisticated system. Keep it as simple as the desired results demand.

Contact: William Cotton, Acting Director, 616/383-0077

Minnesota

Applied Research Center, College of Science and Tecnology
St. Cloud State University

Description: *Goals*—To enable and enhance the cooperative effort in applied research between faculty and area industries. *Activities*—Just getting established; current activity limited to that of the director—making contacts with industries and businesses, searching out sources for possible external funding. *Audience*—Businesses and industries in Central Minnesota. *Innovations*—Faculty to be granted release time from teaching to devote to the development of joint research projects with the area industries.

Structure: *Staffing*—Director, secretary, graduate assistant. *Advisory Board*—Applied Research Committee, consisting of one faculty member from each of the nine departments in the college. *Funding*—College of science and technology. Additional funding from external sources anticipated during the next year. *Program Evaluation*—Too soon to have criteria established. The Applied Research Committee will oversee whatever evaluation is done.

Future Plans: Become established as a resource for area businesses and industries. As cells of inquiry begin occurring, try to keep the faculty involved in all discussions taking place with industry representatives.

Contact: David H. Robinson, Director of Applied Research, 612/255-2149

Montana

University Technical Assistance Program
Montana State University

Description: *Goals*—To provide technical engineering and managerial assistance to manufacturing companies in Montana that are not in a position to hire consultants and thereby save or create jobs. To assist Montana companies in their search for current information and technical expertise. *Activities*—Advertises services. Works with manufacturers referred by the state department of commerce. Handles requests for information or assistance came in. Conducts site visits and works in such areas as facility layout, equipment justification, cost analysis, inventory control, equipment design, and process design. Provides information and referrals. *Audience*—Montana manufacturers, other businesses and firms. *Innovations*—Most work accomplished by staff engineers working individually with manufacturers who have requested help. Recent affiliation with the NASA Industrial Application Center at the University of Southern California will broaden services to computer searches of data bases and access to technical experts nationwide.

Structure: *Staffing*—Director-professor, industrial engineers, secretary. *Funding*—E.D.A., Montana State University, university's Engineering Experiment Station. Beginning to generate income through fees for engineering drawings and NASA Industrial Application Center services. *Program Evaluation*—Number of jobs added or saved and clients' perceptions of whether UTAP helped them increase sales, increase investment, prevent losses, reduce costs, and/or obtain necessary funds.

Future Plans: Increase awareness of services among Montana's manufacturers and other business people. Widen the services available. Help more companies increase their efficiency.

Contact: William R. Taylor, Director, 406/994-3812

New Hampshire

Special Research Agreements
Keene State College

Description: *Goals*—To involve local industry in cooperation research activities using college faculty and students. To conduct research in college and/or industry facilities and projects of mutual interest. *Activities*—A local company manufacturing filtration and separation devices used in genetics, cell, and molecular biology has provided equipment and committed funding to support research related to quality control and new product development. Operations should begin by summer 1988. *Audience*—Industries in southwestern New Hampshire.

Structure: *Staffing*—Faculty and students. No permanent staff to be hired. *Funding*—Industries involved. *Program Evaluation*—Completion of research project agreements.

Products: *Publications*—None yet. Research results may in some cases not be publishable because of proprietary nature; no program description publications planned.

Future Plans: Establish initial agreement successfully. Expand involvement of 4-6 additional industries. Develop long-range 5-10 year joint R&D proposal with successful companies including facilities, equipment, staff.

Advice: Assess local opportunities. Realistically evaluate college resources. Get grass-roots support of research personnel within industry and college. Be sure to have support at top levels of college and industry administration.

Contact: Gordon Leversee, Dean, Division of Sciences, 603/352-1909

New Jersey

Center for Information Age Technology
New Jersey Institute of Technology

Description: *Goals*—To provide objective research based expertise and technical support in information technologies to state and local governments, educational institutions, and nonprofit corporations. *Activities*—Provides advice and technical assistance to organizations making decisions related to the selection of a computer system and installation of communication networks. Offers customized courses and workshops on a wide spectrum of topics from basic computer concepts to management programming and systems design. *Audience*—State and local governments, educational institutions, and nonprofit organizations. *Innovations*—Has developed an effective process through which organizations can implement proven information technologies and systems. Provides faculty and students with opportunities to work in a "real world" laboratory.

Structure: *Staffing*—Executive director, director of technology and consulting, director of systems development, three systems analysts, faculty associates, students, private-sector consultants. *Advisory Board*—Being formed. *Funding*—Grant from the New Jersey Department of Higher Education, donations, contributions from corporations and user fees. *Program Evaluation*—Peer review process that institutionalizes evaluation as part of project management. Department of Higher Education conducts an evaluation of CIAT services as part of the grant process.

Products: *Awards and Recognition*—OTIS; NJ Association of Counties; NJ League of Municipalities; Greater Newark Chamber of Commerce; Hackensack Meadowlands Chamber of Commerce; American Society for Public Administration; NJ Department of Community Affairs.

Future Plans: Expand services to municipalities. Consider software development projects for municipalities and small businesses.

Advice: To have a successful center, you must invest in staff who have the ability to be facilitators and communicators as well as sensitive to the needs of their clients.

Contact: Diane Barbour, Acting Executive Director, 201/596-3035

Division of Continuing Education
New Jersey Institute of Technology

Description: *Goals*—To provide noncredit courses and workshops for professionals, designed to present the most recent advances and findings in technology disciplines and related areas. *Activities*—Enrolls 3,000-3,500 students annually in courses, seminars and workshops throughout the state. Offers programs to industrial and academic clients throughout NJ. Programs cover such areas as computers and communications, hazardous occupations and environments, management, and manufacturing. *Audience*—Professionals and corporations in technology related fields and disciplines. *Innovations*—All programs provided in direct response to industry needs. A number of courses are specially designed inhouse programs, custom tailored to meet the needs of individual corporate clients.

Structure: *Staffing*—Executive director, director, assistant director, coordinator, administrative assistant, two secretaries. *Advisory Board*—Forty members. *Funding*—The division is an ancillary, self-supporting unit of the university. Participants in courses offered by DCE pay fees that fund the division. *Program Evaluation*—Course evaluation given to each participant in every program offered by the division. Follow-ups done by DCE staff on the basis of evaluations.

Products: *Publications*—Semester course catalog, program brochures.

Future Plans: Increase enrollments, both in public programs, and in in-plant programs. Increase emphasis on retraining in response to corporations reducing their work force or closing down.

Advice: You must look carefully at the labor disparities in the work place to determine whether the programs you offer are going to place people in the jobs in demand. You must then be willing to change your programs accordingly if you wish to fulfill a training mission as well as an educational mission.

Contact: Eric Grosse, Executive Director, 201/596-3060

Technology Extension Center in Information Services
New Jersey Institute of Technology

Description: *Goals*—To assist small and medium-sized businesses in developing capacity in the application of new technologies. *Activities* —Provides help in evaluating and selecting systems for office automation, financial management, inventory control and payroll, among others. Operates a 24-hour hotline for emergency technical assistance and problem solving. Offers workshops and on-site technical assistance, problem solving, and training. *Audience*—Small and medium-sized businesses. *Innovations*—Functions as a catalyst by bringing together small and medium-sized businesses with relevant and effective resources at the university. Has established a consortium involving NJIT, Stevens Institute of Technology, and Rutgers University.

Structure: *Staffing*—Program coordinator, marketing specialist systems analyst. Shares technical staff and facilities with CIAT. Also uses faculty associates, students, and private consultants. *Advisory Board*—Twelve members. *Funding*—Grant from the NJ Commission on Science and Technology, equipment donations, user fees. *Program Evaluation*—Hired a consultant to conduct a formal evaluation of its activities in FY 1987. Commission on Science and Technology evaluates TEX. Additional funding provided by the commission after the evaluation.

Future Plans: Expand operations to make services available statewide. Emphasize women and minority-owned businesses. Encourage manufacturing and engineering companies to use more sophisticated technologies such as CAD/CAM.

Advice: Staff, faculty, associates, and students must have sensitivity to the specific needs of small business and must have the ability to listen to and communicate with small businesses.

Contact: Diane Barbour, Acting Director, 201/596-5800

Computer Aids for Industrial Productivity

Rutgers University

Description: *Goals*—To advance industrial productivity through the application of sophisticated modern computer techniques. *Activities*—Conducts research in computer-aided design, software engineering, and machine vision. Develops computer algorithms, software tools, and application software. Uses parallel computing techniques to improve performance with improved cost/benefit ratios. *Audience*—Industrial organizations, both large and small, especially those in electrical, computer, and mechanical manufacturing.

Structure: *Staffing*—Approximately fifty total staff: director, associate director and business manager, fifteen faculty researchers, three staff researchers, twenty-eight graduate research assistants. *Advisory Board*—Industrial Advisory Board, of six members, plus three ex officio. *Funding*—New Jersey Commission on Science and Technology, member fees, government grants, potential income from royalty fees from patents and copyrights. *Program Evaluation*—Size and depth of industrial participation in research program, as well as raising of matched funds. Long-term criteria include the creation of new companies and jobs in the state.

Products: *Publications*—Semiannual research reports, technical reports.

Future Plans: Increase research activities relating to use and application of parallel computation. Develop new special-purpose computer architectures for specific industrial applications. Hold annual workshops in machine vision and parallel computing. Increase industrial participation through recruitment of more member companies.

Contact: Dr. Herbert Freeman, Director, 201/932-3443

Center for Applied Science

William Paterson College of New Jersey

Description: *Goals*—To build the capacity of the northern New Jersey region to develop its science-related economy, in a manner consistent with environmentally sound practices, through the infusion of graduates prepared by academic programs and internships developed in cooperation with the region's business and government communities. *Activities*—Is developing research capabilities in biotechnology and environmental science. In the process of acquiring equipment and enlisting faculty and students. Contacting local science educators to enlist their aid in developing programs to improve education in grammar and high schools. *Audience*—Industry, government, and educational constituents of northern New Jersey. *Innovations*—Intention to accomplish goals within the context of baccalaureate education. All efforts will have an impact on both economic development and the college classroom.

Structure: *Staffing*—Two faculty members released half-time to serve as program director and assistant director. *Advisory Board*—Six members. *Funding*—State grant. *Program Evaluation*—Internal and external evaluation teams being organized to evaluate using a value-added assessment plan over the next five years.

Future Plans: Follow three-year plan. Construct research facilities for biotechnology.

Advice: Encourage the state legislature to provide initial support for innovative educational and research opportunities.

Contact: Dr. Richard Pardi, Director, 201/595-2470

New York

Small Business Energy Efficiency Program
Cornell University

Description: *Goals*—To increase small business energy efficiency and decrease overall state dependence on foreign trade energy sources. *Activities*—Conducts energy surveys and seminars for small business, nonprofit, agribusiness, and farm managers/owners through a network of Cornell Cooperative Extension energy technicians. *Audience*—Small businesses, nonprofit organizations, agribusinesses, farm owner/operators. *Innovations*—Program is a partnership between Cornell Cooperative Extension and the New York State Energy Office. On-site energy surveys performed by approximately fifty Cornell University trained energy technicians housed at regional county cooperative extension centers in all areas of the state. Surveys contain energy efficiency recommendations, product and/or management fact sheets, energy costs, savings, and conservation measure payback period. State-of-the-art computer hardware and tailored software used. Client-technician interaction encouraged and emphasized. As needed, in-depth technical follow-up provided through appropriate Cornell Cooperative Extension staff and faculty, and technical staff of the State Energy Office. Monthly summarized survey data electronically transferred from the regional centers to a data base, at Cornell University program headquarters, for program management, reporting, and research.

Structure: *Staffing*—Cornell central staff—director, administrative assistant, secretary, statistician, agriculture specialist, staff writer/promotion specialist. Field staff—education coordinator, administrative liaison, program monitor. Regional energy technicians. *Advisory Board*—Committee of "experts" in energy systems specific to business type. At grass-roots level, through county cooperative extension advisory committees. *Funding*—Does not generate income. Funding from state's share of oil company restitutionary funds. *Program Evaluation*—Twelve-month follow-up surveys of selected surveyed businesses, individual case studies of selected business/clientele groups.

Products: *Publications*—Business-specific energy computer templates, fact sheets, numerous newspaper articles, radio and TV programs.

Future Plans: From follow-up surveys and related work, modify program for optimum impact.

Advice: Work closely and cooperatively with local stake holders, legitimizers, and state and federal agencies. Ensure clear understanding of program goals, criteria, and expectations among all involved. Employ individuals who enjoy working with and among people, who have the ability and aptitude to learn the technical. Employ technical people who are excellent and inspiring teachers.

Contact: Bruce M. John, Director, 607/255-2008

Small Business Extension
Cornell University

Description: *Goals*—To offer informal educational programs in small business development including feasibility assessment, decision making, basic management, and energy efficiency. *Activities*—Conducts workshops on "Starting a Business," "Entrepreneurship," business management, etc., often related to the specific products/services of clientele. Offers some counseling to specific businesses, including product development, marketing, and referral. Conducts small business energy audits and related economic analysis. *Audience*—Variety of different clients and business interests, including family enterprises, resource-based ventures, mainstreet businesses, and specialized tourism interests. *Innovations*—From the client perspective, extension is viewed as having unique skills in certain types of enterprises as well as providing important more generic assistance in basic decision making, assessing home/family impacts of initiating a business and providing an important referral and networking function.

Structure: *Staffing*—Local extension staff, area community resources, Cornell faculty and staff. *Advisory Board*—Ad-hoc committee composed of local county extension staff and Cornell faculty. *Funding*—Federal, state, and local. Some income generated. Special state appropriation for Small Business Energy Efficiency efforts. *Program Evaluation*—Participant evaluation of business education workshops to critique content, delivery and future needs. Follow-up survey of participants to assess impact of client contact (decisions reached, businesses initiated, referrals used, energy savings, etc.)

Future Plans: Develop an undergraduate instruction program in "Personal Enterprise and Small Business Management" at Cornell.

Advice: Become familiar with other providers and define your special focus in collaboration with others.

Contact: David W. Gross, Senior Extension Associate, 607/255-2825

Programs for Employment and Workplace Systems

Cornell University-NY State School of Industrial and Labor Relations

Description: *Goals*—To provide educational and technical assistance to employers and unions committed to organizational change and employee involvement. *Activities*—Has been instrumental, in conjunction with Xerox and the ACTWU, in developing a network in which employers and unions throughout New York State will be able to keep abreast of the latest activities in labor-management relations, innovations in productivity procedures, and quality improvement techniques. Through educational and technical assistance has been involved in endeavors that not only save jobs but sometimes create new ones. Major projects undertaken with Goulds Pumps, United Steelworkers, Philips Electric, the International Brotherhood of Electrical Workers, Hickey-Freeman and the Amalgamated Clothing Workers. Major effort mounted at Trico with cooperation of the United Automobile Workers to explore whether modifications in production and cost savings methods could be implemented that would enable the company to remain in Buffalo instead of moving to Texas and Mexico. *Audience*—Employers and managers, union officials, employees. *Innovations*—Intensive consultation, interviews, needs assessment, training of teams, use of experts as advisors to teams, recommendations for action by decision makers.

Structure: *Staffing*—Five professionals, two administrative aides. *Funding*—Appropriation from the State of New York, income generated from program fees. *Program Evaluation*—Jobs saved, costs saved, improved productivity, other criteria.

Future Plans: Increase outreach to New York State industry. Solicit suggestions for future directions from outside review committee.

Advice: Hire staffing with appropriate mix of experience and skills.

Contact: Peter Lazes, Director, 212/340-2800

Developmental Impact Studies Center

State University College at Geneseo

Description: *Goals*—To meet the demographic and economic data needs of small area businesses and service agencies. To meet the need for geodemographic training in the school of business and liberal arts programs. *Activities*—Conducts surveys and analyses. *Audience*—Small businesses and service agencies. *Innovations*—Use of expertise of majors from several departments. Preparation of extensive charts and maps in conjunction with the report narrative.

Structure: *Staffing*—Director, supporting staff from school of business. *Funding*—Clients. *Program Evaluation*—Client interviews.

Products: Publications—Report.

Future Plans: Continue development.

Contact: Dr. Darrell Norris, Director, 716/245-5234

Small Business Institute

State University College at Geneseo

Description: *Goals*—To offer management assistance and counseling to small businesses having difficulties. To enable students working in management assistance teams to use their academic training in real situations and the small business managers receive assistance. *Audience*—Small business managers and upper-level undergraduate students. *Innovations*—Close small business manager-student-faculty interaction.

Structure: *Staffing*—Faculty and staff in the school of business. *Funding*—Federal. *Program Evaluation*—Interviews with small business managers and student participants.

Products: *Publications*—Confidential reports to small business managers.

Future Plans: Slightly enlarge the program.

Contact: Dr. Donald J. Onimus, Director, 716/245-5368

The Survey Information Center
State University College at Geneseo

Description: *Goals*—To implement the public-service responsibility of the State University of New York by conducting applied research for businesses, government agencies, nonprofit corporations, hospitals, schools, and community groups. *Activities*—Conducts employee attitude surveys, market surveys, public opinion polls, consumer attitude surveys, program evaluation surveys, economic development surveys, economic concern studies. *Innovations*—Opportunities for students to interact with faculty and clients on "real life" survey efforts.

Structure: *Staffing*—Faculty and staff in the school of business. *Funding*—Clients. *Program Evaluation*—Client satisfaction.

Products: *Publications*—Confidential reports to clients.

Future Plans: Slightly enlarge program.

Contact: Dr. Daniel Strang, 716/245-5367

Division of Applied Research
State University of New York at Buffalo

Description: *Goals*—To conduct contract applied research for small and large companies, nonprofit organizations and agencies, and government entities. *Activities*—Current activities include a year-long tourism study of Niagara Falls, New York; a market study for Studio Arena Theatre in Buffalo. Past projects included a transportation analysis project for the NYS Office of Mental Retardation and Developmental Disabilities. *Audience*—Private or public-sector officials.

Structure: *Staffing*—One full-time staff member, one part-time research assistant, other staff hired as needed. *Funding*—Generated income, grants, SOM support. *Program Evaluation*—Customer satisfaction with the final project.

Future Plans: Continue to generate outside applied research projects and apply for grant money where possible.

Contact: Cheryl L. Shenkle, Research Director, 716/636-3240

Technology Transfer Office
State University of New York

Description: *Goals*—To cooperate with industry in furthering research and in licensing inventions for development and public use. *Activities*—Inventions are evaluated for patentability and marketability and a patent applications is prepared when appropriate. Licensing and option agreements and research contracts are arranged with companies.

Contact: Dr. Leonard E. A. Godfrey, Director, 518-434-7167

Center for Advanced Technology
State University of New York

Description: *Goals*—To promote biotechnology-related research and foster the development of university-industry research collaboration. *Activities*—The center's combination of a strong research base, innovative instructional programs, an actively outreaching faculty, and the quality and visibility of the center's programs have already promoted the development of numerous collaborative activities with industry on an international scale. These activities have included new product development and testing, training, equipment sharing and basic research in the areas of biological sciences, medicine, marine sciences, genetic engineering, immunodynamics, drug development, bioengineering, and others. Contact individual campuses for additional information.

Contact: Robert Baier (Buffalo), 716/831-2446
Richard Koehn (Stonybrook), 516/ 632-8520

Research Centers
State University of New York

Description: *Goals*—To make SUNY facilities and resources available to industry, government and system campuses for various types of research. *Activities*—Research topics include: toxicology, surface science, children and youth, molecular biology and immunology, electronic and electro-optic materials, earthquake engineering, systems dynamics, hazardous waste, superconductivity, and market research. Contact individual campus for additional information.

Contact: Binghamton—Vice President of Graduate Studies Research
Buffalo—Dale M. Lendi, Vice President for Sponsored Research, 716/636-3321
Albany—Jeanne Gullihorn, 518/442-3500
College of Environmental Science and Forestry—Dr. William TullyProvost, 315/470-6510
Stonybrook—Vice President for Graduate Studies Research, 516/632-7040

CALSPAN

State University of New York at Buffalo

Description: *Goals*—To bring together scientists and engineers in western New York to carry out research. *Activities*—The charter of the Research Center is to carry out unclassified basic research related to a broad spectrum of scientific problems and new technologies, thereby utilizing the wide range of interests and talents that are available. Initial programs involve hypersonic flows, turbine heat transfer, computational fluid dynamics, surface physics, molecular energy exchange, and laser induced chemistry.

Structure: *Staffing*—Personnel from the university and from Calspan Corporation.

Contact: Charles E. Treanor, Director, 716/631-6900

Center for Innovative Technology Transfer

State University of New York
College at Oswego

Description: *Goals*—Develop prototype products that can be tested, and if successful, licensed to area businesses for manufacture and marketing. *Activities*—The department of technology, which sponsors the center, has multimillion dollar facilities including twenty-seven technical laboratories with modern equipment for electronics design; computer-aided design and drafting; metal, plastic, wood, and ceramics fabrication; and more. Among the projects the center has taken on to date are a programmable sediment sampler for environmental work in streams and rivers; a leachate digestor to process the runoff from landfills; a gripping device for geriactric care; and an activated carbon "teabag" for removing toxics from liquids.

Structure: *Staffing*—One full time technical staff position; several students hired part-time; emeritus technology faculty hired as consultants. *Funding*—$50,000 grant from the Urban Development Corporation's Regional Economic Development Partnership Program.

Contact: Harry Hawkins, Director, 315/341-2128

North Carolina

Center for Business and Economic Services

University of North Carolina at Wilmington

Description: *Goals*—To collect and distribute data on economic activity in southeastern North Carolina. To organize short courses to prepare individuals to further develop their managerial, technical, and personal capabilities. *Activities*—Has developed a data base measuring various aspects of economic activity in southeastern North Carolina. Prepares regular press releases on the "state of the local economy." Provides detailed analyses of local economic trends in the Carolina Coast Business Review, a semiannual publication of the center. Works with the UNC-Wilmington Office of Special Programs to determine the demand for short courses and to identify instructors for them. *Audience*—Administrators in private and public organizations, economic development organizations, general public.

Structure: *Staffing*—Faculty member, graduate research assistant. *Advisory Board*—None. However, editorial review board for the Carolina Coast Business Review planned. *Funding*—Endowment of the Cameron School of Business Administration at UNC-Wilmington, state appropriations, grants and contracts. *Program Evaluation*—Requests for assistance and client evaluation of services provided.

Products: *Publications*—Semiannual *Carolina Coast Business Review.*

Future Plans: Expand the data base in accordance with expressed needs and availability of additional data. Expand efforts to provide short courses.

Advice: Program should not be highly structured. It should have flexibility to accommodate needs as they arise.

Contact: William W. Hall, Jr., Director, 919/395-3419

International Trade and Investment Opportunities
Western Carolina University

Description: *Goals*—To assist North Carolina businesses in establishing trade and/or investment connections in countries with which WCU has ties. *Activities*—Provides economic information about designated countries to interested firms. Assists firms in contacting key individuals in target country. Facilitates communication (including translation, interpretation service) between company and overseas entity. Accompanies company officials on initial and negotiating visits to designated countries. Provides orientation/language training for company personnel to be assigned overseas. *Audience*—Business enterprises in region and throughout North Carolina. *Innovations*—Entire program of using university overseas contacts to assist international business activities.

Structure: *Staffing*—No staff assigned exclusively to these activities. *Funding*—Direct expenses charged to companies. Successful transactions are followed by a 3 percent contribution from company. *Program Evaluation*—Formal evaluation not required.

Future Plans: Continue activities described above.

Advice: Make sure that business entities at both ends are legitimate, reputable. Especially for state institutions, make sure that activity facilitated does not result in loss of jobs in the state.

Contact: Ellerd Hulbert, Director, 704/227-7223

Ohio

NETWORK BG
Bowling Green State University

Description: *Goals*—To provide a single university point-of-contact for business development and scientific assistance. *Activities*—Provides referrals to university faculty from businesses requesting project assistance. Four types of projects: scientific testing, new product development, strategic business planning, and organizational training. *Audience*—Businesses requiring project assistance from university faculty.

Structure: *Funding*—University funds, project fees.

Contact: Dr. Christopher S. Dunn, Director, Research Services Office, 419/372-2482

The McMaster Institute
Bowling Green State University

Description: *Activities*—Serves as liaison between scientific and technical industry and the university community. Has established contacts with the business community, puts on programs such as technology transfer briefings and conferences on creativity in business. *Audience*—Scientific and technical industry community.

Structure: *Funding*—Established through endowment gift; projects funded through grants.

Contact: Karen Bunting, Executive Director, 419/372-6820

Center for Labor-Management Cooperation
Miami University

Description: *Goals*—To promote cooperation between labor and management in southwestern Ohio. To support area labor-management councils in southwestern Ohio. *Activities*—Publishes quarterly newsletter, establishes, maintains and updates resource library. Conducts sponsored research in labor-relations. Organizes regional conference on current issues in labor-management cooperation. *Audience*—Labor and management leaders and area labor-management councils in southwestern Ohio. *Innovations*—Part of a statewide network of state-funded centers with similar goals and functions. A cooperative program between Miami University and the University of Cincinnati.

Structure: *Staffing*—Director, associate director, graduate assistant, secretary.

Contact: William B. Snavely, Director, 513/529-7258

Pennsylvania

Institute of State and Regional Affairs-Economic Development Program
Pennsylvania State University at Harrisburg

Description: *Goals*—To provide economic development education for practitioners and those seeking a professional career in economic development. To provide a periodic learning opportunity for those interested in working in economic development to address selected topics. *Activities*—Offers a concentrated, one-week, forty-hour, four CEU course in economic development. Is seeking accreditation by the American Economic Development Council. Convenes economic development seminars and workshops. Offers an economic development course concentration in MRP/MPA degree programs. Explores establishment of economic development degree. Offers policy advice and conducts research in economic development. *Audience*—Public officials, economic development agency personnel, managers, investors, developers, members of economic development boards or commissions, those working in or interested in a professional career in economic development in the public or private sector. *Innovations*—Activities are very practice oriented and reflect role of the university as a resource in economic development program of Commonwealth of Pennsylvania and public and private sectors.

Structure: *Staffing*—Various faculty of Penn State, staff of Institute of State and Regional Affairs, as appropriate, director of institute. *Advisory Board*—Eight members. *Funding*—Program strives to be self-supporting; funded by university, cooperating public and private organizations, tuition and registration fees, project contracts, income generated to meet costs. *Program Evaluation*—Courses, seminars, workshops subject to evaluation by those enrolled or attending. Project activity by sponsor and by usefulness of product and experience in further project activity, faculty teaching and publication, experience for students and potential practitioners.

Products: *Publications*—Proceedings of four annual "Concerns of the Capital Region" conferences. Course outline and materials for first annual Pennsylvania Basic Economic Development Course. Course outline and materials for courses offered, during 1985-86 and 1986-87.

Future Plans: Offer second annual Pennsylvania Basic Economic Development Course; gain its accreditation. Establish a degree program in economic development.

Advice: Have a sense of the market being served and the resources necessary to fulfill desired objectives. Have an advisory committee of key leaders from public and private sectors.

Contact: Professor Irving Hand, Director, 717/948-6178

State Data Center
Pennsylvania State University at Harrisburg

Description: *Activities*—Makes statistical information gathered by the U.S. Bureau of the Census accessible to the public and to all state agencies *Audience*—General public, state government officials.

Structure: *Staffing*—Five-member staff.

Contact: Professor Irving Hand, Director, 717/948-6178

South Dakota

Utilization of DSC Small Business Institute as SBIR Information Center
Dakota State College

Description: *Goals*—To provide for dissemination of information related to SBIR (Small Business Innovative Research) grant possibilities. *Activities*—Provides a regional site as part of a national network for dissemination of information related to SBIR. Assists South Dakota industries in preparing proposals to the SBIR program. Provides money for research and product development in areas that relate to specific national needs, which generally involve high technology items such as computer technology. *Audience*—Regional area of the Midwest surrounding South Dakota, industries and businesses that employ less than 500 individuals. *Innovations*—Will utilize the DSC Small Business Institute as a central point. Provides the abilities of qualified, experienced personnel for businesses and industries to apply for SBIR grants. Personnel identified to work with the SBIR center to continue close association with the economic development efforts.

Structure: *Staffing*—Principal investigator, project director. *Advisory Board*—Anticipated 3-5 member committee. *Funding*—South Dakota governor's office of economic development. Any income generated would be used to continue to fund additional efforts. *Program Evaluation*—Number of industries assisted in applying for SBIR grants. If South Dakota can increase by at least one additional company in the number of SBIR awards to South Dakota, another measure of success will have been achieved.

Future Plans: Provide for wider dissemination of material to more industries and businesses in South Dakota and region.

Advice: Continue to expand any and all efforts of cooperation between industry, higher education, and state offices of economic development.

Contact: Faye Kann, Assistant to President/Director of SBIR, 605/256-5156

Tennessee

Business Research Center

University of Tennessee at Chattanooga

Description: *Goals*—To sponsor and conduct research on the local economy. *Activities*—Currently studying impact of local taxes. *Audience*—Government and business.

Structure: *Staffing*—Faculty as needed under direction of associate dean. *Funding*—Gifts. *Program Evaluation*—Reports published.

Products: *Publications*—On UTC's contribution to the local economy.

Future Plans: Publish one major study per year on the local economy.

Contact: Dean Irvin D. Reid, 615/755-4313

Texas

Technology Transfer Program

University of North Texas

Description: *Goals*—To transfer technology created at the university to industry in order to promote economic development and enhance the nation's competitiveness. *Activities*—Patents, inventions, and copyrights computer software created at the university. Transfers technology via licensing, assignment of title, and similar means. *Audience*—Industry, developers, state and local agencies, economic development programs. *Innovations*—Assignment of title and joint ventures.

Structure: *Staffing*—Patent/copyright officer, four research office staff members. *Advisory Board*—Five-member internal Patent and Copyright Committee. *Funding*—Institutional research office budget, income generated from licensing and other transfers. *Program Evaluation*—Number of transfers.

Future Plans: Enhance reporting of inventions and copyrightable creations. Develop new methods of technology transfer.

Contact: Mark Elder, Patent/Copyright Officer, 817/565-3940

South Texas Research Triangle

Texas A & I University

Description: *Goals*—To utilize the resources of the three area colleges to promote research and development in the Coastal Bend for the advancement of industry and the economy. *Activities*—Consists of a network of three colleges (Texas A&I University, Corpus Christi University and Del Mar College) in the Coastal Bend of Texas. Promotes, researches, and establishes instruments to develop public-private partnerships for economic development. *Audience*—Area colleges, local industry, government entities.

Structure: *Staffing*—Board of Directors. *Advisory Board*—Ten members. *Funding*—Private contributions, grants initially. Later, income from commercialized research.

Future Plans: Acquire real estate; recruit firms to locate there. Establish a business incubator.

Advice: Go slowly in picking an appropriate market niche.

Contact: Dr. Steve Altman, President, 512/595-3207

Center for Technology Development and Transfer (CTDT)
University of Texas at Austin

Description: *Goals*—To commercialize university research as rapidly as possible. To attain a beneficial "deal" for the university and researchers. *Activities*—Analyzes and packages "deals" and seeks investors or joint partners who will transfer a product or process into an existing company or start a new one. Assists university researchers in securing resources for applied/development research. *Audience*—University researchers/investors in Texas, companies. *Innovations*—Under statute, the university system may hold equity in a venture it helps through CTDT's transfer activities. Program has the authority and flexibility to enter into a wide range of business structures, to do what is needed to commercialize university research.

Structure: *Staffing*—Director, coordinator, administrative assistant, interns, volunteers, research assistants as needed. Also works closely with Texas A&M's Technology Business Division, Texas Engineering Experiment Station, College Station, Texas. *Advisory Board*—Subcommittee of the Engineering Foundation Advisory Council. CTDT will also develop an ad hoc advisory group in 1988. *Funding*—Internal university resources. Revenues from "deals" will flow back to CTDT to make the center self-supporting in 5-6 years. *Program Evaluation*—Number of deals done, number of research projects assisted with number of people enlightened about the technology transfer/commercialization process.

Products: *Publications*—Brochure, strategic plan, activity report, articles.

Future Plans: Convene a conference featuring twenty current projects. Accelerate project development and marketing. Assist in completing development of the Texas Innovation Information Network System.

Advice: Develop policies for negotiation of deals early and make sure those policies are consistent with broader institutional goals. Get one or two successes under your belt before advertising your presence or services; otherwise you will be so swamped with the intake that output will be slowed.

Contact: Steve Szygenda, 512/471-3700

Bureau of Business and Economic Research
University of Texas at El Paso

Description: *Goals*—To provide timely reports of changes in social, demographic, economic, and industrial characteristics of western Texas, southern New Mexico, and the State of Chihuahua, Mexico to persons, businesses, and governments that have an interest. *Activities*—Designs and conducts funded and nonfunded research on U.S. and Mexican border economic issues. Publishes findings in the *Southwest Journal of Business and Economics* and in *The El Paso Economic Review*. *Audience*—Persons, businesses, and governments that have an interest in the U.S. and Mexican border economic activities and issues. *Innovations*—Has one of the most extensive files on U.S. and Mexican border issues, including the Mexican Border Industrialization Program (Macquilla or Twin Plant). Private clients accepted. Bilingual English/Spanish capability.

Structure: *Staffing*—Director, academic and research; assistant director academic and research; two research assistants, clerical. *Funding*—Gifts, grants, subscriptions, contracts.

Products: *Publications—Southwest Journal of Business and Economics*, quarterly, refereed. *The El Paso Economic Review*, bi-monthly. Statistical Abstract of El Paso.

Contact: Henry P. King, Assistant Director, 915/747-5122

Center for Professional Development
University of Texas at El Paso

Description: *Goals*—To provide high-quality continuing education for business, industry, and the professions that serves to update, train, and/or meet professional licensing requirements. *Activities*—Over 100 seminars, workshops, and courses offered each year, conducted on both an "open" (publicly offered) and a "closed" (inhouse) basis. Many available in Spanish, custom designed, and conducted at the university or onsite and in Mexico. *Audience*—Business, industry, and professional personnel. *Innovations*—Some programs cooperatively sponsored with local chapters of professional organizations. Subscription series designed by representatives of organizations who participate in the "subscription series."

Structure: *Staffing*—Director, senior administrative clerk. *Advisory Board*—Twenty-five representatives from various organizations and firms in the city. *Funding*—Self-sustaining program of the college of business administration. Income derived from program fees. *Program Evaluation*—Number of participants registered in the various seminars, workshops, and courses. New programs are developed and current ones revised according to those who use the service.

Products: *Publications—Guide to Programs*, individual announcements of each seminar, course, etc.

Future Plans: Develop more programs for the Maquila Industry (twin plants in Mexico).

Contact: Lee Nelson, Director, 915/747-5187 x5209

Programs in Science and Technology
University of Texas at San Antonio

Description: *Goals*—To facilitate university/business cooperation and research. *Activities*—Conducts applied research on industrially oriented statistical problems ranging from biomedical problems to contract bidding irregularities on bidding for public lands. Conducts research and development in all areas ranging from psychology to engineering on the interaction and interface between humans and instrumentation ranging from computer-assisted learning to the improvement of the cockpit environment of high performance aircraft. Conducts research in the biosciences and biotechnology emphasizing primarily modern, biochemically based biology and neurobiology at the cell and molecular level. Conducts research on physical and geological problems ranging from microbiological studies of the formation of limestone and the analysis of water resources to the study of biochemical pumps and potential drugs for biomedical purposes. Conducts research in mathematics, computer science, systems design, engineering, biosciences, biotechnolgy, chemistry, bioorganic chemistry, physics, and geology.

Structure: *Funding*—$0-1,000,000 a year per program.

Contact: Dr. James Tracey, Dean, 512/691-4450

Washington

Center for Economic and Business Research
Western Washington University

Description: *Goals*—To carry out econometric modeling and forecasting of regional economic trends in northwestern Washington. *Activities*—Currently building a four-county econometric income and employment forecasting model. Model may be used for short-term forecasting of activity in basic economic sectors by both private and public planners. *Audience*—Community, business persons, those involved with economic development. *Innovations*—Program has been in place less than a year. Plans to issue periodic reports on the outlook for northwestern Washington.

Structure: *Staffing*—Half-time faculty person as director, assistance from faculty. *Advisory Board*—Faculty committee helps director. *Funding*—University. Some income generated. *Program Evaluation*—As the program is very new, progress is initially measured by forecast accuracy and by solicited community feedback on the usefulness of the work.

Products: *Publications*—"An Economic Forecasting Model for Whatcom County and the Outlook to 1989."

Future Plans: Continue work on econometric models, publishing in journals, and the annual regional business and economic outlook conference.

Contact: Dr. David Merrifield, Director, 206/676-3909

Province-State Interaction Project
Western Washington University

Description: *Goals*—To compile a complete and contemporary listing and analysis of all Canadian Province/U.S. State "interactions." *Activities*—Project, known as the Province-State Interaction Project, is about half completed. So far, has data from thirty-one states and seven provinces. Research coordinated under the Forty-Ninth Parallel Institute, Montana State University, Bozeman. Sponsored and endorsed by the Canadian Embassy, the National Governors' Association, and the Western Canadian Studies Group of the United States and Canada. *Audience*—State and provincial governments, through the auspices and under the sponsorship of the National Governors' Association. Private business interests in the states and provinces. *Innovations*—Research is unique. Nothing like it has been done since the first such study under the State Department Research Grant funding in the early 1970s. This will be the only data base and analysis available to both federal government, provincial and state governments, and private businesses in both nations.

Structure: *Staffing*—Five members of the steering committee, thirteen principal investigators in the thirteen major areas of research focus, small staff of clerical personnel. *Advisory Board*—From two Canadian and three American universities. Also, the thirteen principal investigators form an advisory/directory body for the project. *Funding*—Grants from the Donner Foundation of the United States and Canada, the Embassy of Canada in Washington, D.C., and the Northwest Foundation. Funding proposals at present under consideration by other government agencies, foundations, and corporations. *Program Evaluation*—Interim report presented before National Governors' Association annual meeting. General consensus was that the project is on track.

Future Plans: Continue and complete project within time lines and budget.

Contact: Gerard R. Rutan, Professor, 206/676-2910

West Virginia

Community Services
Shepherd College

Description: *Goals*—To deliver high-quality credit and noncredit classes to the business community. *Activities*—Offers credit and noncredit courses to businesses in West Virginia. Acting through local chambers of commerce or economic development authority, assesses needs and designed courses to meet those needs. *Audience*—Businesses, labor unions, public and private schools. *Innovations*—Courses often offered in plant, during shift breaks, so that the maximum number of employees can attend.

Structure: *Staffing*—Assistant academic dean, branch campus director. *Funding*—Program funded through fees charged the companies desiring training. Does not generate any income over expenses. *Program Evaluation*—Class evaluations.

Future Plans: Shepherd plans to continue to expand credit and noncredit courses offered to businesses.

Advice: Be aggressive. Interpret an initial "No" as a "Call me later."

Contact: Daniel C. Starliper, Assistant Academic Dean, 304/876-2511 x203

Science and Technology Center of Southern West Virginia
West Virginia College of Graduate Studies

Description: *Goals*—To mobilize faculty talent to serve West Virginia in its social and economic development. To mobilize faculty to assist in development of its professionals, leaders, and technical staff. To encourage technological innovations in smaller companies. *Activities*—Provides instruction in computer applications, statistical process control, and related technical fields. Provides technical assistance to small and medium-sized companies through applied R&D and consulting. Assists emerging companies in computer-oriented or "high tech" fields. *Audience*—Small and medium-sized emerging employers (businesses); engineers, technicians, managers, and professionals in West Virginia. *Innovations*—Service delivered live over sixteen-county region from a dozen locations. Telecourses, teleconferences delivered by satellite uplink and microwave interconnects.

Structure: *Staffing*—Nonprofit corporation supported by three state-owned colleges in the Charleston, West Virginia area: West Virginia College of Graduate Studies, West Virginia Institute of Technology, and West Virginia State College. Center employs a coordinator and secretary. Numerous faculty members work on specific projects. The three supporting institutions provide three senior unit directors (faculty half-time) and three professionals (faculty part-time). *Advisory Board*—Board of Directors composed of fifteen persons from private sector and higher education. *Funding*—Grants from the governor and private business and is seeking grants from private foundations and the Appalachian Regional Commission, State Board of Regents. *Program Evaluation*—When cooperative technology transfer facility is in operation (predicted spring of 1988), criteria will include numbers of clients and students served, reported satisfaction of clients or students.

Future Plans: Rent facility with teaching laboratories. Acquire computer, CAD/CAM, teleport equipment. Deliver technical services at company sites. Deliver services by telecommunications links. Offer instructional courses by contract or open enrollment.

Advice: Require commitment of funds from supporting colleges for three-year development period, including commitment of faculty talent and leadership. Seek support from the state to provide developmental funding for three years. Seek corporate subscriptions or matching support (space, equipment) and active commitment to make use of the program.

Contact: Mary F. Powers, 304/344-0978

Wisconsin

Bureau of Business and Economic Research

University of Wisconsin-La Crosse

Description: *Goals*—To identify opportunities in the service region of the university utilizing the faculty resources. To help find solutions to regional economic development problems. To organize the faculty and student resources for research on those problems. *Activities*—Collects data pertinent to regional analysis and individual research projects. Recently completed feasibility study for regional conference center for local private foundation. Conducts various studies: consumer acceptance of debit cards, the demand for rental housing for the City of La Crosse, development of multifamily housing, potential demand for dairy product exports from western Wisconsin, customer profiles. Searching for further research opportunities related to local economic development. Publishes economic indicators. *Audience*—Local businesses, local units of government, chambers of commerce, local development organizations.

Structure: *Staffing*—Director, two clerical staff, three part-time research associates, three part-time research assistants. *Advisory Board*—Five members. *Funding*—University general program funds, grants and contracts from federal, local, and private sources. *Program Evaluation*—Number of faculty in the research program in a year, amount of outside funds generated by the research activities in a year, amount of local economic development that can be attributed to these activities.

Products: *Publications—La Crosse Area Business and Economic Review*; feasibility study for the Skumsrud Thrune Heritage Center; "A Study of the Demand for Rental Housing in the City of La Crosse"; feasibility study for a fast food restaurant in the Valley View Mall, "Multi-Family Housing in La Crosse, Wisconsin"; "Demand for Quality Housing in the City of La Crosse."

Future Plans: Continue to search for and becoming aware of opportunities for the faculty of the college of business at UWL to undertake research that will help foster regional economic development in southwestern Wisconsin. Assist faculty in writing research proposals for grants and contracts to do that research. Continue to collect information for regional economic data base to support these research projects.

Contact: Gordon S. Sanford, Director, 608/785-8500

Central Wisconsin Economic Research Bureau
University of Wisconsin-Stevens Point

Description: *Goals*—To disseminate timely economic data and analysis to the communities of central Wisconsin. *Activities*—In order to help foster economic development in the region, publishes and presents the "Quarterly Economic Indicators" report. These reports completed and released for and in each county of central Wisconsin. Report contains a special section devoted to a topic of economic significance. Special reports usually given by UWSP faculty. Publishes papers on tourism, health care, migration, the high-tech industry base, and the economic significance of small businesses to Central Wisconsin. *Audience*—Business, political, and education leaders of Portage, Marathon, and Wood counties. *Innovations*—Substantial newspaper, radio, and television coverage of the publications and presentations instrumental in reaching the general population of the region.

Structure: *Staffing*—Director, research assistant, administrative assistant, two student employees. *Funding*—Grants from private sponsors, university resources. *Program Evaluation*—Number of people who attend the presentation, continued support of sponsors.

Products: *Publications*—"Quarterly Economic Indicators." *Awards and Recognition*—Coverage by the local media.

Future Plans: Continue present operation. If and when the opportunity should present itself, expand into other activities and geographical areas.

Advice: Make sure there is a market for your product. Funding must be on stable and reliable basis. Other nonfinancial resources must be available, i.e., research staff and support personnel.

Contact: Dr. Randy Cray, 715/346-3774

Design Research Center
University of Wisconsin-Stout

Description: *Goals*—To provide students and faculty with an opportunity to do in-depth research on selected real-world design problems as a service to a specific client for regional economic development, and as a contribution to the body of design knowledge in general. *Activities*—Involves students and faculty in team interdisciplinary research activities, including such topics as an experimental bathroom for the elderly and handicapped, a body waste removal system, food preparation design work, product innovation for Wisconsin manufacturers, package design, and downtown historic preservation projects. *Audience*—Educational, federal, or service agencies; private individuals or industry; the design profession. *Innovations*—Can draw on an unusually wide range of technical and research expertise to form dynamic interdisciplinary student and faculty design teams appropriate to selected design problems.

Structure: *Staffing*—For projects, staffing drawn from art and design department. Project leaders form teams of students and staff from other disciplines as needed. Projects could involve as few as 3-40 people. Leaders of the projects are ranked design educators with a proven history of professional design expertise. *Funding*—Grant from UW-Stout faculty research initiative program. No income generated in pilot program to determine acceptance for future self-supporting programs. *Program Evaluation*—Completed evaluations by the students and manufacturing representatives.

Products: *Publications*—"The Design Research Center" brochure.

Future Plans: Continue program and include new client firms (dependent on student availability and client acceptance of operational costs).

Advice: Allow adequate time for responses from prospective clients in promoting interest in the program.

Contact: Gene Bloedorn, Director, 715/232-1287

Wisconsin Innovation Service Center
University of Wisconsin-Whitewater

Description: *Goals*—To channel investment into commercially viable concepts by encouraging further development among inventors with promising new product ideas and by dissuading inventors from investment in expensive patents and/or prototypes if the market potential for their particular ideas appears poor. *Activities*—Assists inventors in overcoming the odds of failure. Provides a preliminary analysis of the marketability of a new product idea, enabling an inventor to make more informed development decisions. Has evaluated over 2,000 ideas for small businesses and independent inventors from across the U.S.A. and foreign countries, as well as for university and private programs. *Audience*—Independent inventors and small businesses.

Structure: *Staffing*—Program manager, program assistant, technical consultants, student evaluators. *Advisory Board*—Twenty members. *Funding*—Small Business Development Center. *Program Evaluation*—Follow-up surveys to determine whether the information WISC provided assisted in the decisions the client made about the invention.

Contact: Debra Knox-Malewicki, Program Manager, 414/472-1365

Indices

Two indices were developed to provide maximum coverage for programs and convenience for the reader. Each program can be found easily by means of its location (state and institution) and by its primary objective as well.

Index by Program Objective

*Within each *objective*, programs are listed first by category (A-D), then alphabetically by the *state* in which the institution is located, *then* by *name* of institution.

Applied Research

Economic Development Programs
  Illinois State University A, p.19
Arkansas Biotechnology Center
  University of Arkansas at Fayetteville C, p.100
Laboratories for Environmental Research
  Indiana University Northwest C, p.104
Center for Basic and Applied Research
  Wichita State University C, p.105
Center for Energy Studies
  Wichita State University C, p.106
Rehabilitation Engineering Center
  Wichita State University C, p.106
Center for Rural Massachusetts
  University of Massachusetts-Amherst C, p.111
Applied Mechanics Institute
  Western Michigan University C, p.111
Paper Pilot Plant
  Western Michigan University C, p.113
Edison Animal Biotechnology Center
  Ohio University C, p.121
Solid State Research Collaboration
  Arizona State University D, p.133
College of Engineering & Technology
Applied Research Center
  Southern Illinois University
  at Carbondale D, p.140
Applied Research Center, College
of Science & Technology
  St. Cloud State University D, p.150
Computer Aids for Industrial Productivity
  Rutgers University D, p.153
Center for Applied Science
  William Paterson College of New Jersey D, p.153
The Survey Information Center
  State University College at Geneseo D, p.156
Center for Advanced Technology
  State University of New York D, p.156
Research Centers
  State University of New York D, p.156
CALSPAN
  State University of New York at Buffalo D, p.157
Division of Applied Research
  State University of New York at Buffalo D, p.156
Design Research Center
  University of Wisconsin-Stout D, p.165

Data Collection and Dissemination

Morrison Institute of Public Policy
  Arizona State University A, p.6
Institute for Community & Regional Development
  Eastern Michigan University A, p.42
Bureau of Business and Economic Research
  East Tennessee State University A, p.66
Auburn U. Econometric Model
  Auburn University at Montgomery C, p.96
Center for Business Research
  Arizona State University C, p.96
Arizona Hospitality Research and Resource Center
  Northern Arizona University C, p.98
Orange County Annual Survey
  University of California, Irvine C, p.101
Orange County Business & Economic Studies
  University of California, Irvine C, p.102
Florida Resources and Environmental
Analysis Center
  Florida State University C, p.102
Florida Solar Energy Center
  University of Central Florida C, p.103
Ground Water Information Center
  Montana College of Mineral Science
  and Technology C, p.113
North Carolina Institute of Economic
Development
  North Carolina Central University C, p.119
Special Data Collection
  Keene State College C, p.114
Department of City and Regional Planning
  Cornell University Statutory Colleges C, p.117
Technology Development Assessment
  Wright State University C, p.122
Center for Applications
of Advanced Technology
  Lamar University C, p.124
Border Business Indicators
  Laredo State University C, p.125
Economic Development Programs
  Midwestern State University C, p.125
IMPACT Center
  Washington State University C, p.126
Stout Economic and Technical
Assistance Center
  University of Wisconsin-Stout C, p.128
Center for Economic Development
and Business Research
  Jacksonville State University D, p.132
Center for Business and Economic Services
  Livingston University D, p.132
The Center for Business and Economic Services
  Troy State University D, p.133
Economic Research Institute
  Humboldt State University D, p.135
Center for Financial Analysis
  Florida State University D, p.137
Center for Personnel and Industrial
Relations Research
  Florida State University D, p.137

Florida Economic Forecasting Center
  Florida State University D, p.137
Center for Economic and Business Research
  University of North Florida D, p.137
Center for Economic and Management Research
  University of South Florida D, p.138
Regional Economics Center
  Columbus College D, p.139
Business Research Center
  Southern Illinois University
  at Carbondale D, p.139
Rural Development Center
  Southern Illinois University
  at Carbondale D, p.140
Center for Economic Development
and Business Research
  Wichita State University D, p.142
Economic Development Center
  Eastern Kentucky University D, p.144
Acadiana Business Conditions Report
  University of Southwestern Louisiana D, p.146
Lafayette Economics Indicators
  University of Southwestern Louisiana D, p.146
Water Resources and Contaminant Hydrology
  Western Michigan University D, p.149
Developmental Impact Studies Center
  State University College at Geneseo D, p.155
Center for Labor-Management Cooperation
  Miami University D, p.158
State Data Center
  Pennsylvania State University
  at Harrisburg D, p.159
Business Research Center
  University of Tennessee at Chattanooga D, p.160
Center for Technology Development and Transfer
  University of Texas at Austin D, p.161
Bureau of Business and Economic Research
  University of Texas at El Paso D, p.161
Center for Economic and Business Research
  Western Washington University D, p.163
Province-State Interaction Project
  Western Washington University D, p.162
Bureau of Business and Economic Research
  University of Wisconsin-La Crosse D, p.164
Central Wisconsin Economic Research Bureau
  University of Wisconsin-Stevens Point D, p.165

Education, Training and Management Development

Office of Economic Development
  Arkansas Tech University A, p.7
Research & Public Service
  University of Arkansas at Little Rock A, p.8
Small Business Institute
  Florida Atlantic University A, p.12
Center for Management Development
  Florida International University A, p.13
Florida Economic Development Center
  Florida State University A, p.13
Small Business Institute
  Florida State University A, p.14
Center for Human Resource Management
  University of North Florida A, p.14
Center for Organizational Communication
Research and Service
  University of South Florida A, p.14
Small Business Institute
  University of West Florida A, p.14
Economic Development
  Eastern Illinois University A, p.18
Business Services Bureau
  Northeastern Illinois University A, p.20
Programs for Effective Participatory Systems
  Southern Illinois University
  at Carbondale A, p.21
Center for Entrepreneurial Resources
  Ball State University A, p.26
Institute for Business and Economic
Development Services
  Ball State University A, p.27
Center for Research and Management Services
  Indiana State University A, p.27
Technology Services Center
  Indiana State University A, p.28
O. Gene Bicknell Center for Entrepreneurship
  Pittsburg State University A, p.32
The Institute for Economic Development
  Pittsburg State University A, p.32
Center for Entrepreneurship
  Wichita State University A, p.33
East Kentucky Small Business
Development Center
  Morehead State University A, p.34
Waterfield Center for Business
and Governmental Research
  Murray State University A, p.35
Community and Resource Development
  University of Massachusetts-Amherst A, p.41
Division of Continuing Education
  University of Massachusetts-Amherst A, p.41
Center for Entrepreneurship
  Eastern Michigan University A, p.41
Office for Economic Expansion
  Grand Valley State University A, p.43
Institute for Technological Studies
  Western Michigan University A, p.46
Regional Education and Economic Development
  Western Michigan University A, p.46
Public Administration and Center
for Applied Urban Research
  University of Nebraska at Omaha A, p.49
International Agricultural Programs
  North Carolina A & T State University A, p.54

Index by Program Objective

Management Assistance Center
State University College of Technology at Utica/Rome A, p.52
Business and Industry Centers
State University of New York A, p.52
Center for Urban and Public Affairs
Wright State University A, p.57
Center for the Quality of Working Life
Pennsylvania State University at Harrisburg A, p.62
Institute for Public Service
Shippensburg University of Pennsylvania A, p.62
Economic Development Programs
Black Hills State College A, p.64
Small Business Institute
East Tennessee State University A, p.66
Institute for Public Service & Division of Continuing Ed.
University of Tennessee at Knoxville A, p.67
Small Business Assistance Center
Lamar University A, p.68
Economic Development Programs
University of Texas at San Antonio A, p.71
Business & Economic Research Council
University of Texas at Tyler A, p.72
Longwood Business Innovation Center
Longwood College A, p.74
Center for Innovation and Development
University of Wisconsin-Stout A, p.79
Institute for Building Sciences
Florida A & M University B, p.85
International Banking Center
Florida International University B, p.86
Center for Banking and Financial Institutions
Florida State University B, p.86
Dick Pope Sr. Institute for Tourism Studies
University of Central Florida B, p.86
Center for Urban Design & Research
University of South Florida B, p.86
Government Procurement Technical Assistance Center
New Jersey Institute of Technology B, p.88
Industrial Innovation Extension Service
Cornell University Statutory Colleges B, p.89
Transportation Institute
North Carolina A & T State University B, p.90
Technology Business Development Division
Texas A & M University B, p.94
Engineering Experiment Station
Texas A & M University B,. p94
Conference on East Asian Investment in Arizona's Future
Arizona State University C, p.97
Economic Outlook Center
Arizona State University C, p.98
Applied Microbiology Training
Arkansas Tech University C, p.98
Continuing Maritime Education
California Maritime Academy C, p.101
Vocational-Technical Services Center
Indiana State University C, p.103
Associate of Science in General Studies
Indiana University at Kokomo C, p.103
Directed Continuing Education Programs
Indiana University at Kokomo C, p.104
Workshop on Economic Development
Indiana University East C, p.104
Center for Continuing Engineering Education
Wichita State University C, p.105
Entrepreneurial Development Institute
Kentucky State University C, p.107
Economic Development Teleconference
Western Kentucky University C, p.108
Financial Institutions Seminar
Western Kentucky University C, p.108
Manville/NLU Pulp Paper Science Program
Northeast Louisiana University C, p.109
USL 7 & 7 Program
University of Southwestern Louisiana C, p.110
Export New York
State University of New York C, p.118
Job Training and Placement for Older Workers Project
North Carolina Central University C, p.119
Institute for Industry Studies
Cornell University Statutory Colleges C, p.118
Collaborative Program with Public Service Dislocated Workers, Entrepreneurial Training Pilot Project
Bowling Green State University C, p.120
Center for Economic Education
University of Akron C, p.120
Oregon Business Week
Western Oregon State College C, p.123
Adjunct Faculty from Industry
Oregon Institute of Technology C, p.122
Senior Projects
Oregon Institute of Technology C, p.123
Demand Training Survey
Lamar University C, p.124
Executive Leadership Program
University of Texas at San Antonio C, p.125
Entrepreneurial Training Program
Johnson State College C, p.126
Office of Business Outreach
University of Wisconsin-La Crosse C, p.128
Projects With Industry
University of Wisconsin-Stout C, p.128
Outlook on the Mexican Economy
Arizona State University D, p.133
Small Business Institute
Southern Arkansas University D, p.134
University of Southern CO Extended Studies Program
University of Southern Colorado D, p.136

Index by Program Objective

Division of Continuing Education
  Florida Atlantic University D, p.136
Center for Labor Research and Studies
  Florida International University D, p.136
Management Institute
  University of Central Florida D, p.137
Bay Area Consortium for Business & Higher Education
  University of South Florida D, p.138
Institute for Information Systems Management
  University of South Florida D, p.138
Center for Managerial and Executive Development
  Southern Illinois University at Carbondale D, p.140
Executive Development Center
  Western Illinois University D, p.141
National Technological University
Wichita Area Consortium
  Wichita State University D, p.143
University/Community College/ Technical Institute Cooperative
  Wichita State University D, p.143
Office of Training Services
  Murray State University D, p.145
Center for Manufacturing Technology
  Western Kentucky University D, p.145
USL Conference Center
  University of Southwestern Louisiana D, p.146
Growth Management Center
  University of Southern Maine D, p.147
Business Research and Service Institute
  Western Michigan University D, p.148
Center for Information Age Technology
  New Jersey Institute of Technology D, p.151
Division of Continuing Education
  New Jersey Institute of Technology D, p.152
Technology Extension Center in Information Services
  New Jersey Institute of Technology D, p.152
Small Business Energy Efficiency Program
  Cornell University Statutory Colleges D, p.154
Programs for Employment and Workplace Systems
  Cornell University Statutory Colleges D, p.155
Small Business Extension
  Cornell University Statutory Colleges D, p.154
Small Business Institute
  State University College at Geneseo D, p.155
Center for Business and Economic Services
  University of North Carolina at Wilmington D, p.157
The McMaster Institute
  Bowling Green State University D, p.158
Institute of State and Regional Affairs
  Pennsylvania State University at Harrisburg D, p.159
Center for Professional Development
  University of Texas at El Paso D, p.162
Community Services
  Shepherd College D, p.163
Science and Technology Center of Southern West Virginia
  West Virginia College of Graduate Studies D, p.163

Funding Procurement

Florida Atlantic Innovation Center
  Florida Atlantic University A, p.12
Small Business Institute
  University of West Florida A, p.14
Technology Commercialization Center
  Western Illinois University A, p.26
Center for Research and Management Services
  Indiana State University A, p.27
The Institute for Economic Development
  Pittsburg State University A, p.32
Office for Economic Expansion
  Grand Valley State University A, p.43
Small Business and Technology Development Center
  Western Carolina University A, p.55
Mon Valley Renaissance
  California University of Pennsylvania A, p.59
South Dakota Business Services
  University of South Dakota A, p.65
Institute for Public Service & Division of Continuing Education
  University of Tennessee at Knoxville A, p.67
Center for Entrepreneurship and Economic Development
  Pan American University A, p.69
Small Business Support
  Castleton State College A, p.73
Center for Economic Action/Small Business Development Center
  Concord College A, p.77
New York State Trade Adjustment Assistance Center
  State University of New York at Binghamton C, p.119
Mid-America, Inc., Certified Development Company
  Pittsburg State University D, 142
Economic Development Center
  Eastern Kentucky University D, p.144
SBIR Information Center
  Dakota State College D, p.159
Center for Technology Development and Transfer
  University of Texas at Austin D, p.161

General Technical Assistance and Business Development

Index by Program Objective

Alaska Economic Development Center
University of Alaska, Southeast A, p.5
Economic Development Center
Henderson State University A, p.8
Hahn Center for Entrepreneurship & Innovation
Arizona State University A, p.6
Entrepreneurial Service Center
University of Arkansas at Fayetteville A, p.8
University Relations
University of California, Davis A, p.9
NASA Southern Technology Applications Center
State University System of Florida A, p.10
Center for Entrepreneurial Studies
University of North Florida A, p.14
University North Conference
University of South Florida A, p.14
Chair of Private Enterprise
Kennesaw College A, p.15
Office of Economic Development
Southern Illinois University
at Carbondale A, p.20
Office of Regional Research and Service
Southern Illinois University
at Carbondale A, p.21
Center for Advanced Manufacturing
and Production
Southern Illinois University
at Edwardsville A, p.23
Regional Research & Development
Services: Area Dev. Program
Southern Illinois University
at Edwardsville A, p.23
Center for Urban Economic Development
University of Illinois at Chicago A, p.24
Industrial Research and Liaison Program
Indiana University, Bloomington A, p.29
Roe R. Cross Center for Business
and Economic Development
Emporia State University A, p.30
Institute for Business and Economic Affairs
Fort Hays State University A, p.31
Small Business Development Center
Southeastern Louisiana University A, p.39
Aid to Inventors
University of Southwestern Louisiana A, p.39
Louisiana Productivity Center
University of Southwestern Louisiana A, p.40
The New Enterprise Institute
University of Southern Maine A, p.40
Southeastern Massachusetts Partnership
Southeastern Massachusetts University A, p.40
Center for Economic Development
University of Massachusetts-Amherst A, p.41
Higher Education Consortium
for Economic Development
Eastern Michigan University A, p.41
Center for Technology and Small Business
Development
Central Missouri State University A, p.47
Technological Innovation Program
University of New Mexico A, p.51
Economic Development and Technical
Assistance Center
State University College at Plattsburgh A, p.51
Regional Development Institute
East Carolina University A, p.53
Economic Developmnt Div., Center
for Improving Mountain Living
Western Carolina University A, p.55
Cushwa Center for Industrial Development
Youngstown State University A, p.57
Economic Development Activities
University Center at Tulsa A, p.58
Ben Franklin Partnership Program
Pennsylvania State University
at Harrisburg A, p.62
Center for Economic and Community Development
Slippery Rock University
of Pennsylvania A, p.63
Center for Innovation and Technology Enterprise
South Dakota School of Mines
and Technology A, p.66
John Gray Institute
Lamar University A, p.68
Commercialized Technology
Texas A & I University A, p.69
Economic Development Programs
Texas Woman's University A, p.70
Economic Development Programs
University of Houston-Clear Lake A, p.70
University Center for Economic
Development & Research
University of North Texas A, p.71
Center for Energy and Economic Diversification
University of Texas of the
Permian Basin A, p.72
Project NEED
Clinch Valley College A, p.73
Entrepreneurial & Private Enterprise Center
Old Dominion University A, p.75
Center for Applied Business, Engineering,
and Technology
West Virginia Institute of Technology A, p.77
Small Business Institute
University of Wisconsin-La Crosse A, p.78
Center for American Indian Economic Development
Northern Arizona University B, p.84
Economic and Industrial Development Center
University of Arkansas at Monticello B, p.84
Technology Commercialization Center
Southern Illinois University
at Carbondale B, p.86
Rutgers Minority Investment Program
Rutgers University B, p.88

Southwest Center for Advancement of Labor/Management Corp.
  Wright State University B, p.92
Institute for Innovation & Design in Engineering
  Texas A & M University, Texas Engineering Experiment Station B, p.93
Aid to Small Mine Operators
  Montana College of Mineral Science and Technology C, p.113
The Food and Agriculture Industry: Its Impact & Future
  Cornell University Statutory Colleges C, p.118
Economic Development Coordination Project for Whatcom, Co,
  Western Washington University C, p.126
Environmental Quality Lab
  Western Kentucky University D, p.145
Engineering Research Center
  University of Maryland, College Park D, p.147
Industrial Development Institute
  Michigan State University D, p.148
University Technical Assistance Program
  Montana State University D, p.150
NETWORK BG
  Bowling Green State University D, p.158
Wisconsin Innovation Service Center
  University of Wisconsin-Whitewater D, p.165

International Trade

College of Business, Division of External Affairs
  Auburn University at Montgomery A, p.4
World Technology Center
  Florida International University A, p.12
World Technology Center
  Southern College of Technology A, p.16
Small Business Assistance and Procurement Assistance
  Southern Illinois University at Edwardsville A, p.24
South Dakota Business Services
  University of South Dakota A, p.65
Geo-Heat Center
  Oregon Institute of Technology B, p.93
Conference on East Asian Investment in Arizona's Future
  Arizona State University C, p.99
Export New York
  State University of New York C, p.118
New York State Trade Adjustment Assistance Center
  State University of New York at Binghamton C, p.119
Outlook on the Mexican Economy
  Arizona State University D, p.133
International Trade and Investment Opportunities
  Western Carolina University D, p.158

Networking and Partnerships

Academic-Corporate Relations
  Florida State University A, p.13
Pacific Business Center Program
  University of Hawaii A, p.16
Great Rivers Corridor of Opportunity
  Western Illinois University A, p.25
Institute for Research and Community Services
  Edinboro University of Pennsylvania A, p.62
Office of Industry Relations
  University of Virginia A, p.75
I/A Partnership Board
  Towson State University C, p.110
Towson State University Industry Luncheon Club
  Towson State University C, p.110
Economic Development Summit
  University of North Carolina at Asheville C, p.119
ESU Ben Franklin Partnership
  East Stroudsburg University of Pennsylvania C, p.123
South Louisiana Economic Council
  Nicholls State University D, p.146
WESTOPS
  Western Michigan University D, p.150

Research and Development

Coll. of Engineering & Applied Sciences Eng. Excellence Program
Arizona State University C, p.96
Center for Research in Electro-optics and Lasers
  University of Central Florida C, p.102
Florida Solar Energy Center
  University of Central Florida C, p.103
Institute for Simulation and Training
  University of Central Florida C, p.103
Center for Basic and Applied Research
  Wichita State University C, p.105
Center for Energy Studies
  Wichita State University C, p.106
Rehabilitation Engineering Center
  Wichita State University C, p.106
Materials Institute for Innovation and Enterprise
  Western Michigan University C, p.112
Paper Pilot Plant
  Western Michigan University C, p.113
Center for Advanced Biotechnology & Medicine
  Rutgers University C, p.114
Center for Advanced Food Technology
  Rutgers University C, p.115
Center for Ceramics Research
  Rutgers University C, p.116
Program in Fiber Optic Materials Research
  Rutgers University C, p.116
Edison Animal Biotechnology Center
  Ohio University C, p.121
Shannon Point Marine Center
  Western Washington University C, p.127

Index by Program Objective

Solid State Research Collaboration
  Arizona State University D, p.133
Engineering and Industrial Experiment Station
  University of Central Florida D, p.137
Center for International Economic and Business Studies
  University of Florida D, p.137
Centers for Engineering Development and Reseach
  University of South Florida D, p.138
Aquaculture Research and Extention
  Kentucky State University D, p.144
Research Centers
  State University of New York D, p.156
South Texas Research Triangle
  Texas A & I University D, p.160
Programs in Science and Technology
  University of Texas at San Antonio D, p.162

Research Parks/Incubators

Office for the Advancement of Developing Industries
  University of Alabama, Birmingham A, p.4
Arizona State University Research Park
  Arizona State University A, p.5
Centre for Advanced Technology
  Colorado State University A, p.10
University Research Park at Lewes, Delaware
  University of Delaware A, p.10
Tampa Bay R & D Park
  University of South Florida A, p.14
Idaho State University Business Incubator Center
  Idaho State University A, p.17
Research Park and Economic Development
  Idaho State University A, p.17
NKU Foundation Research and Technology Park
  Northern Kentucky University A, p.36
Northeast Lousiana Small Business Incubator System
  Northeast Louisiana University A, p.37
Industrial Incubators Program
  University of Southwestern Louisiana A, p.39
Manufacturing Resources and Productivity Center
  Ferris State University A, p.42
Oakland Technology Park and Oakland University
  Oakland University A, p.44
Urban Institute
  University of North Caroiina at Charlotte A, p.54
Innovation Center & Research Park
  Ohio University A, p.56
Oregon Technology Incubator
  Oregon Institute of Technology A, p.59
Victoria Small Business Incubator Project
  University of Houston-Victoria A, p.70
University Business Innovation Center
  University of Virginia A, p.76
Richmond Technology and Enterprise Center
  Virginia Commonwealth University A, p.76
WSU Research & Technology Park
  Washington State University A, p.78
GENESIS
  University of Arkansas at Fayetteville B, p.84
Biomedical Research and Innovation Center
  Florida International University B, p.85
Business Incubator and Technology Transfer Center
  New Jersey Institute of Technology B, p.87
Northern Advanced Technology Corporation
  State University College at Potsdam B, p.90

Rural Development

Idaho State University Business Incubator Center
  Idaho State University A, p.17
Small Business Development Center
  St. Cloud State University A, p.47
Ohio Rural Universities Program
  Bowling Green State University A, p.56
Regional Services Institute
  Eastern Oregon State College A, p.58
Rural Services Institute
  Mansfield University of Pennsylvania A, p.61
Center for Innovation, Technology and Entrpreneurship
  South Dakota State University A, p.64
Small Farm Research and Extension Program
  Florida A & M University B, p.85
Economic Development Action Plan
  Mississippi State University B, p.87
Small Farm Program
  Kentucky State University C, p.107
Center for Rural Massachusetts
  University of Massachusetts-Amherst C, p.111
Rural Development Center
  Southern Illinois University at Carbondale D, p.140

Small Business Development Centers

Small Business Development Center of Alaska
  University of Alaska A, p.4
Small Business Development Center
  Adams State College A, p.9
Florida Small Business Development Center
  State University System of Florida A, p.11
Small Business Development Center
  Idaho State University A, p.18
Small Business Development Center
  Southern Illinois University at Carbondale A, p.22

Index by Program Objective

Small Business Development Center
Western Illinois University A, p.26
Terre Haute Area Small Business Development Center
Indiana State University A, p.29
ESU Small Business Development Center
Emporia State University A, p.31
Small Business Development Center
Pittsburg State University A, p.32
Kansas Small Business Development Center
Wichita State University A, p.34
East Kentucky Small Business Development Center
Morehead State University A, p.34
Small Business Development Center
Murray State University A, p.35
Small Business Development Center
Western Kentucky University A, p.36
Louisiana Small Business Development Center
Northeast Louisiana University A, p.37
Small Business Development Center
Northwestern State University of Louisiana A, p.38
USL Small Business Development Center
University of Southwestern Louisiana A, p.40
Small Business Development Center
St. Cloud State University A, p.47
Small Business Development Center
Missouri Southern State College A, p.48
Small Business Development Center
Northern Montana College A, p.48
Small Business Development Center
Keene State College A, p.49
Small Business Development Center
Plymouth State College A, p.50
New Jersey Small Business Development Center
Rutgers University A, p.50
New York State Small Business Development Center
State University of New York A, p.53
Small Business Development Center
Oregon Institute of Technology A, p.61
Small Business Development Center
Pennsylvania State University at Harrisburg A, p.64
Small Business Development Center
Winthrop,College A, p.63
Tennessee Small Business Development Center, ETSU Subcenter
East Tennessee State University A, p.66
Small Business Development Center
Pan American University A, p.72
Small Business Development Center
University of Wisconsin-La Crosse A, p.78

Technology Transfer

Northern Economic Initiatives Center
Northern Michigan University A. p.43
Business & Industrial Development Institute
Saginaw Valley State University A, p.45
Office of Industrial Research and Technology Transfer
University of Wisconsin-Milwaukee A, p.79
Biotechnology Transfer Project
Cornell University Statutory Colleges B, p.89
The Edison Materials Technology Center
Wright State University B, p.92
Fisheries Study-Dardenelle Reservoir
Arkansas Tech University C, p.99
Physical, Chemical and Biological Analysis Laboratory
Arkansas Tech University C, p.99
Federal Highway Administration Technology Transfer Center
University of Arkansas at Pine Bluff C, p.100
Center for Coal Science
Western Kentucky University C, p.108
Office of Technology Transfer
Louisiana State University, Baton Rouge C, p.109
Horticultural Economic Development Center
Western Michigan University C, p.111
Center for Technology Transfer and Economic Development
University of Missouri-Rolla C, p.113
Agricultural Experiment Station
University of Arkansas at Fayetteville D, p.134
Arkansas Center for Technology Transfer
University of Arkansas at Fayetteville D, p.135
Center for Technology Transfer
Pittsburg State University D, p.141
Technology Transfer Office
State University of New York D, p.156
Center for Innovative Technology Transfer
State University College at Oswego D, p.157
Technology Transfer Program
University of North Texas D, p.160

Index by State

Alabama
Auburn University at Montgomery
  College of Business, Division of External Affairs A, p.4
  Auburn U. Econometric Model C, p.96
Jacksonville State University
  Center for Economic Development and Business Research D, p.132
Livingston University
  Center for Business and Economic Services D, p.132
Troy State University
  The Center for Business and Economic Services D, p.133
University of Alabama, Birmingham
  Office for the Advancement of Developing Industries A, p.4

Alaska
University of Alaska
  Small Business Development Center of Alaska A, p.4
University of Alaska, Southeast
  Alaska Economic Development Center A, p.5

Arizona
Arizona State University
  Arizona State University Research Park A, p.5
  Hahn Center for Entrepreneurship & Innovation A, p.6
  Morrison Institute of Public Policy A, p.6
  Center for Business Research C, p.96
  Coll. of Engineering & Applied Sciences Eng. Excellence Program C, p.96
  Conference on East Asian Investment in Arizona's Future C, p.97
  Economic Outlook Center C, p.98
  Outlook on the Mexican Economy D, p.133
  Solid State Research Collaboration D, p.133
Northern Arizona University
  Center for American Indian Economic Development B, p.84
  Arizona Hospitality Research and Resource Center C, p.98

Arkansas
Arkansas Tech University
  Office of Economic Development A, p.7
  Applied Microbiology Training C, p.98
  Fisheries Study-Dardenelle Reservoir C, p.99
  Physical, Chemical and Biological Analysis Laboratory C, p.99
Henderson State University
  Economic Development Center A, p.8
Southern Arkansas University
  Small Business Institute D, p.134
University of Arkansas at Fayetteville
  Entrepreneurial Service Center A, p.8
  GENESIS B, p.84
  Arkansas Biotechnology Center C, p.100
  Agricultural Experiment Station D, p.134
  Arkansas Center for Technology Transfer D, p.135
University of Arkansas at Little Rock
  Research & Public Service A, p.8
University of Arkansas at Monticello
  Economic and Industrial Development Center B, p.84
University of Arkansas at Pine Bluff
  Federal Highway Administration Technology Transfer Center C, p.100

California
California Maritime Academy
  Continuing Maritime Education C, p.101
  Humboldt State University
  Economic Research Institute D, p.135
University of California, Davis
  University Relations A, p.9
University of California, Irvine
  Orange County Annual Survey C, p.101
  Orange County Business & Economic Studies C, p.102

Colorado
Adams State College
  Small Business Development Center A, p.9
Colorado State University
  Center for Advanced Technology A, p.10
University of Southern Colorado
  University of Southern CO Extended Studies Program D, p.136

Delaware
University of Delaware
  University Research Park at Lewes, Delaware A, p.10

Florida
Florida A & M University
  Institute for Building Sciences B, p.85
  Small Farm Research and Extension Program B, p.85
Florida Atlantic University
  Florida Atlantic Innovation Center A, p.12
  Small Business Institute A, p.12
  Division of Continuing Education D, p.136
Florida International University
  Center for Management Development A, p.13
  World Technology Center A, p.12
  Biomedical Research and Innovation Center B, p.85
  International Banking Center B, p.86
  Center for Labor Research and Studies D, p.136
Florida State University
  Academic-Corporate Relations A, p.13

Florida Economic Development Center A, p.13
Small Business Institute A, p.14
Center for Banking and Financial Institutions B, p.86
Florida Resources and Environmental Analysis Center C, p.102
Center for Financial Analysis D, p.137
Center for Personnel and Industrial Relations Research D, p.137
Florida Economic Forecasting Cente D, p.137
State University System of Florida
NASA Southern Technology Appliations Center A, p.10
Florida Small Business Development Center A, p.11
University of Central Florida
Southeast Technology Application Center A, p.7
Dick Pope Sr. Institute for Tourism Studies B, p.86
Center for Research in Electro-Optics C,102
Florida Solar Energy Center C, p.103
Institute for Simulation and Training C, p.103
Engineering and Industrial Experiment Station D, p.137
Management Institute D, p.137
University of Florida
Center for International Economic and Business Studies D, p.137
University of North Florida
Center for Entrepreneurial Studies A, p.14
Center for Human Resource Management A, p.14
Center for Economic and Business Research D, p.137
University of South Florida
Center for Organizational Communication Research and Service A, p.14
Tampa Bay R & D Park A, p.14
University North Conference A, p.14
Center for Urban Design & Research B, p.86
Bay Area Consortium for Business & Higher Education D, p.138
Center for Economic and Management Research D, p.138
Centers for Engineering Development and Reseach D, p.138
Institute for Information Systems Management D, p.138
Professional Development Center D, p.138
University of West Florida
Small Business Institute A, p.14

Georgia
Columbus College
Regional Economics Center D, p.139
Kennesaw College
Chair of Private Enterprise A, p.15
Southern College of Technology
World Technology Center A, p.16

Hawaii
University of Hawaii
Pacific Business Center Program A, p.16

Idaho
Idaho State University
Idaho State University Business Incubator Center A, p.17
Research Park and Economic Development A, p.17
Small Business Development Center A, p.17

Illinois
Eastern Illinois University
Economic Development Programs A, p.18
Illinois State University
Economic Development Programs A, p.19
Northeastern Illinois University
Business Services Bureau A, p.20
Southern Illinois University at Carbondale
Office of Economic Development A, p.20
Office of Regional Research and Service A, p.21
Programs for Effective Participatory Systems A, p.21
Small Business Development Center A, p.22
Technology Commercialization Center B, p.86
Business Research Center D, p.139
Center for Managerial and Executive Development D, p.140
College of Engineering & Technology Applied Research Center D, p.140
Rural Development Center D, p.140
Southern Illinois University at Edwardsville
Center for Advanced Manufacturing and Production A, p.23
Regional Research & Development Services: Area Dev. Program A, p.23
Small Business Assistance and Procurement Assistance A, p.24
University of Illinois at Chicago
Center for Urban Economic Development A, p.24
Western Illinois University
Great Rivers Corridor of Opportunity A, p.25
Small Business Development Center A, p.26
Technology Commercialization Center A, p.26
Executive Development Center D, p.141

Indiana
Ball State University
Center for Entrepreneurial Resources A, p.26
Institute for Business and Economic Development Services A, p.27

Index by State

Indiana State University
  Center for Research and Management Services A, p.27
  Technology Services Center A, p.28
  Terre Haute Area Small Business Development Center A, p.29
  Vocational-Technical Services Center C, p.103
Indiana University, Bloomington
  Industrial Research and Liaison Program A, p.29
Indiana University at Kokomo
  Associate of Science in General Studies C, p.103
  Directed Continuing Education Programs C, p.104
Indiana University East
  Workshop on Economic Development C, p.104
Indiana University Northwest
  Laboratories for Environmental Research C, p.104

Kansas
Emporia State University
  Roe R. Cross Center for Business and Economic Development A, p.30
  Small Business Development Center A, p.31
Fort Hays State University
  Institute for Business and Economic Affairs A, p.31
Pittsburg State University
  O. Gene Bicknell Center for Entrepreneurship A, p.32
  Small Business Development Center A, p.32
  The Institute for Economic Development A, p.32
  Center for Technology Transfer D, p.141
  Mid-America, Inc., Certified Development Company D, p.142
Wichita State University
  Center for Entrepreneurship A, p.33
  Kansas Small Business Development Center A, p.34
  Center for Basic and Applied Research C, p.105
  Center for Continuing Engineering Education C, p.105
  Center for Energy Studies C, p.106
  Rehabilitation Engineering Center C, p.106
  Center for Economic Development and Business Research D, p.142
  National Technological University
  Wichita Area Consortium D, p.143
  University/Community College/Technical Institute Cooperative D, p.143

Kentucky
Eastern Kentucky University
  Economic Development Center D, p.144
Kentucky State University
  Entrepreneurial Development Institute C, p.107
  Small Farm Program C, p.107
  Aquaculture Research and Extention D, p.144
Morehead State University
  East Kentucky Small Business Development Center A, p.34
Murray State University
  Small Business Development Center A, p.35
  Waterfield Center for Business and Governmental Research A, p.35
  Office of Training Services D, p.145
Northern Kentucky University
  NKU Foundation Research and Technology Park A, p.36
Western Kentucky University
  Small Business Development Center A, p.36
  Center for Coal Science C, p.108
  Economic Development Teleconference C, p.108
  Financial Institutions Seminar C, p.109
  Center for Manufacturing Technology D, p.145
  Environmental Quality Lab D, p.145

Louisiana
Louisiana State University, Baton Rouge
  Office of Technology Transfer C, p.109
Nicholls State University
  South Louisiana Economic Council D, p.146
Northeast Louisiana University
  Louisiana Small Business Development Center A, p.37
  Northeast Lousiana Small Business Incubator System A, p.37
  Small Business Development Center A, p.38
  Manville/NLU Pulp Paper Science Program C, p.109
Northwestern State University of Louisiana
  Small Business Development Center A, p.38
Southeastern Louisiana University
  Economic Development A, p.39
University of Southwestern Louisiana
  Aid to Inventors A, p.39
  Industrial Incubators Program A, p.39
  Louisiana Productivity Center A, p.39
  USL Small Business Development Center A, p.40
  Commercializing University Technology B, p.87
  USL 7 & 7 Program C, p.110
  Acadiana Business Conditions Report D, p.146
  Lafayette Economics Indicators D, p.146
  USL Conference Center D, p.146

Maine
University of Southern Maine
  The New Enterprise Institute A, p.40
  Growth Management Center D, p.147

Maryland
Towson State University
  I/A Partnership Board C, p.110

Towson State University Industry
Luncheon Club C, p.110
University of Maryland, College Park
Engineering Research Center D, p.147

Massachusetts
Southeastern Massachusetts University
Southeastern Massachusetts
Partnership A, p.40
University of Massachusetts-Amherst
Center for Economic Development A, p.41
Community and Resource Development A, p.41
Center for Rural Massachusetts C, p.111

Michigan
Eastern Michigan University
Center for Entrepreneurship A, p.41
Higher Education Consortium for
Economic Development A, p.41
Institute for Community & Regional
Development A, p.42
Ferris State University
Manufacturing Resources and
Productivity Center A, p.42
Grand Valley State University
Office for Economic Expansion A, p.43
Michigan State University
Industrial Development Institute D, p.148
Northern Michigan University
Northern Economic Initiatives Center A, p.43
Oakland University
Oakland Technology Park and
Oakland University A, p.44
Saginaw Valley State University
Business & Industrial Development
Institute A, p.45
Western Michigan University
Institute for Technological Studies A, p.46
Regional Education and Economic
Development A, p.46
Applied Mechanics Institute C, p.111
Horticultural Economic Development
Center C, p.112
Materials Institute for Innovation
and Enterprise C, p.112
Paper Pilot Plant C, p.113
Business Research and Service Institute D, p.148
Water Resources and Contaminant
Hydrology D, p.149
WESTOPS D, p.150

Minnesota
St. Cloud State University
Small Business Development Center A, p.47
Applied Research Center, College
of Science & Technology D, p.150

Mississippi
Mississippi State University
Economic Development Action Plan B, p.87

Missouri
Central Missouri State University
Center for Technology and Small
Business Development A, p.47
Missouri Southern State College
Small Business Development Center A, p.48
University of Missouri-Rolla
Center for Technology Transfer
and Economic Development C, p.113

Montana
Montana College of Mineral Science
and Technology
Aid to Small Mine Operators C, p.113
Ground Water Information Center C, p.113
Montana State University
University Technical Assistance
Program D, p.150
Northern Montana College
Small Business Development Center A, p.48

Nebraska
University of Nebraska at Omaha
Public Administration and Center
for Applied Urban Research A, p.49

New Hampshire
Keene State College
Small Business Development Center A, p.49
Special Data Collection C, p.114
Special Research Agreements D, p.151
Plymouth State College
Small Business Development Center A, p.50

New Jersey
New Jersey Institute of Technology
Business Incubator and Technology
Transfer Center B, p.87
Government Procurement Technical
Assistance Center B, p.88
Center for Information Age Technology D, p.151
Division of Continuing Education D, p.152
Technology Extension Center in
Information Services D, p.152
Rutgers University
New Jersey Small Business Development
Cente A, p.50
Rutgers Minority Investment Program B, p.88
Center for Advanced Biotechnology
& Medicine C, p.114
Center for Advanced Food Technology C, p.115
Center for Ceramics Research C, p.115
Program in Fiber Optic Materials
Research C, p.116

Index by State

  - Computer Aids for Industrial Productivity D, p.153
- Thomas A. Edison State College
  - Collaborative Program with Public Service Electric and Gas C, p.116
- William Paterson College of New Jersey
  - Center for Applied Science D, p.153

New Mexico
- University of New Mexico
  - Technological Innovation Program A, p.51

New York
- Cornell University Statutory Colleges
  - Biotechnology Transfer Project B, p.89
  - Industrial Innovation Extension Service B, p.89
  - Department of City and Regional Planning C, p.117
  - The Food and Agriculture Industry: Its Impact & Future C, p.118
  - Institute for Industry Studies C, p.118
  - Small Business Energy Efficiency Program D, p.154
  - Small Business Extension D, p.154
  - Programs for Employment and Workplace Systems D, p.155
- State University College at Geneseo
  - Developmental Impact Studies Center D, p.155
  - Small Business Institute D, p.155
  - The Survey Information Center D, p.156
- State University College at Oswego
  - Center for Innovative Technology Transfer D, p.157
- State University College at Plattsburgh
  - Economic Development and Technical Assistance Center A, p.51
- State University College at Potsdam
  - Northern Advanced Technology Corporation B, p.90
- State University College of Technology at Utica/Rome
  - Management Assistance Center A, p.52
- State University of New York
  - Business and Industry Centers A, p.52
  - New York State Small Business Development Center A, p.53
  - Export New York C, p.118
  - Center for Advanced Technology D, p.156
  - Research Centers D, p.156
  - Technology Transfer Office D, p.156
- State University of New York at Binghamton
  - New York State Trade Adjustment Assistance Center C, p.119
- State University of New York at Buffalo
  - Division of Applied Research D, p.156
  - CALSPAN D, p.157

North Carolina
- East Carolina University
  - Regional Development Institute A, p.53
- North Carolina A & T State University
  - International Agricultural Programs A, p.54
  - Agriculture Extension Programs B, p.90
  - Transportation Institute B, p.90
- North Carolina Central University
  - Job Training and Placement for Older Workers Project C, p.119
  - North Carolina Institute of Economic Development C, p.119
- University of North Carolina at Asheville
  - Economic Development Summit C, p.119
- University of North Carolina at Charlotte
  - Urban Institute A, p.54
- University of North Carolina at Wilmington
  - Center for Business and Economic Services D, p.157
- Western Carolina University
  - Economic Devlpmnt Div., Center for Improving Mountain Living A, p.55
  - Small Business and Technology Development Center A, p.55
  - International Trade and Investment Opportunities D, p.158

Ohio
- Bowling Green State University
  - Ohio Rural Universities Program A, p.56
  - Dislocated Workers, Entrepreneurial Training Pilot Project C, p.120
  - NETWORK BG D, p.158
  - The McMaster Institute D, p.158
- Miami University
  - Center for Labor-Management Cooperation D, p.158
- Ohio University
  - Innovation Center & Research Park A, p.56
  - Edison Animal Biotechnology Center C, p.121
- University of Akron
  - Center for Economic Education C, p.120
- Wright State University
  - Center for Urban and Public Affairs A, p.57
  - Southwest Center for Advancement of Labor/Management Corp. B, p.92
  - The Edison Materials Technology Center B, p.92
  - Technology Development Assessment C, p.122
- Youngstown State University
  - Cushwa Center for Industrial Development A, p.57

Oklahoma
- University Center at Tulsa
  - Economic Development Activities A, p.58

Oregon
- Eastern Oregon State College
  - Regional Services Institute A, p.58

- Oregon Institute of Technology
  - Oregon Technology Incubator A, p.59
  - Small Business Development Center A, p.61
  - Geo-Heat Center B, p.93
  - Adjunct Faculty from Industry C, p.122
  - Senior Projects C, p.123
- Western Oregon State College
  - Oregon Business Week A, p.123

Pennsylvania

- California University of Pennsylvania
  - Mon Valley Renaissance A, p.59
- East Stroudsburg University of Pennsylvania
  - ESU Ben Franklin Partnership C, p.123
- Edinboro University of Pennsylvania
  - Institute for Research and Community Services A, p.61
- Mansfield University of Pennsylvania
  - Rural Services Institute A, p.61
- Pennsylvania State University at Harrisburg
  - Ben Franklin Partnership Program A, p.62
  - Center For the Quality of Working Life A, p.62
  - Small Business Development Center A, p.64
  - Institute of State and Regional Affairs D, p.159
  - State Data Center D, p.159
- Shippensburg University of Pennsylvania
  - Institute for Public Service A, p.62
- Slippery Rock University of Pennsylvania
  - Center for Economic and Community Development A, p.63

South Carolina

- Winthrop College
  - Small Business Development Center A, p.63

South Dakota

- Black Hills State College
  - Economic Development Programs A, p.64
- Dakota State College
  - SBIR Information Center D, p.159
- South Dakota School of Mines and Technology
  - Center for Innovation and Technology Enterprise A, p.66
- South Dakota State University
  - Center for Innovation, Technology and Entrpreneurship A, p.64
- University of South Dakota
  - South Dakota Business Services A, p.65

Tennessee

- East Tennessee State University
  - Bureau of Business and Economic Research A, p.66
  - Small Business Institute A, p.66
  - Tennessee Small Business Development Center, ETSU Subcenter A, p.66
- University of Tennessee at Chattanooga
  - Business Research Center D, p.160
- University of Tennessee at Knoxville
  - Institute for Public Service & Division of Continuing Ed. A, p.67

Texas

- Lamar University
  - Demand Training Survey C, p.124
  - John Gray Institute A, p.68
  - Small Business Assistance Center A, p.68
  - Lamar Univ. Center for Applications of Advanced Technology C, p.124
- Laredo State University
  - Border Business Indicators C, p.125
- Midwestern State University
  - Economic Development Programs C, p.125
- Pan American University
  - Center for Entrepreneurship and Economic Development A, p.69
  - Small Business Development Center A, p.72
- Texas A & I University
  - Commercialized Technology A, p.69
  - South Texas Research Triangle D, p.160
- Texas A & M University
  - Institute for Innovation & Design in Engineering B, p.93
  - Technology Business Development Division B, p.94
- Texas Woman's University
  - Economic Development Programs A, p.70
- University of Houston-Clear Lake
  - Economic Development Programs A, p.73
- University of Houston-Victoria
  - Victoria Small Business Incubator Project A, p.70
- University of North Texas
  - University Center for Economic Development & Research A, p.71
  - Technology Transfer Program D, p.160
- University of Texas at Austin
  - Center for Technology Development and Transfer D, p.161
- University of Texas at El Paso
  - Bureau of Business and Economic Research D, p.161
  - Center for Professional Development D, p.162
- University of Texas at San Antonio
  - Economic Development Programs A, p.71
  - Executive Leadership Program C, p.125
  - Programs in Science and Technology D, p.162
- University of Texas at Tyler
  - Business & Economic Research Council A, p.72
- University of Texas of the Permian Basin
  - Center for Energy and Economic Diversification A, p.72

Vermont

- Castleton State College
  - Small Business Support A, p.73

Johnson State College
  Entrepreneurial Training Program C, p.126

Virginia
Clinch Valley College
  Project NEED A, p.73
Longwood College
  Longwood Business Innovation Center A, p.74
Old Dominion University
  Entrepreneurial & Private Enterprise Center A, p.75
University of Virginia
  Office of Industry Relations A, p.75
  University Business Innovation Center A, p.76
Virginia Commonwealth University
  Richmond Technology and Enterprise Center A, p.76

Washington
Washington State University
  WSU Research & Technology Park A, p.76
  IMPACT Center C, p.126
Western Washington University
  Economic Development Coordination Project for Whatcom, Co. C, p.126
  Shannon Point Marine Center C, p.127
  Center for Economic and Business Research D, p.162
  Province-State Interaction Project D, p.163

West Virginia
Concord College
  Center for Economic Action/Small Business Development Center A, p.77
Shepherd College
  Community Services D, p.163
West Virginia College of Graduate Studies
  Science and Technology Center of Southern West Virginia D, p.163
West Virginia Institute of Technology
  Center for Applied Business, Engineering, and Technology A, p.77

Wisconsin
University of Wisconsin-La Crosse
  Small Business Development Center A, p.78
  Small Business Institute A, p.78
  Office of Business Outreach C, p.128
  Bureau of Business and Economic Research D, p.164
University of Wisconsin-Milwaukee
  Office of Industrial Research and Technology Transfer A, p.79
University of Wisconsin-Stevens Point
  Central Wisconsin Economic Research Bureau D, p.165
University of Wisconsin-Stout
  Center for Innovation and Development A, p.79
  Incubator A, p.80
  Small Business Development Center A, p.80
  Projects With Industry C, p.128
  Stout Economic and Technical Assistance Center C, p.128
  Design Research Center D, p.165
University of Wisconsin-Superior
  Small Business Development Center A, p.80
University of Wisconsin-Whitewater
  Technology Transfer Program A, p.81
  Wisconsin Innovation Service Center D, p.165

Recently Published by AASCU Press

ALLIES FOR ENTERPRISE: Highlights of the 1987-88 National Conferences on Higher Education and Economic Development

MINORITIES IN PUBLIC HIGHER EDUCATION: At a Turning Point

COLLEGES AND UNIVERSITIES FOR CHANGE: America's Comprehensive Public State Colleges and Universities
by *Fred F. Harcleroad* and *Allan W. Ostar*

EXPLORING COMMON GROUND: A Report on Business/Academic Partnerships

BUSINESS AND ECONOMICS FUNDING GUIDE

American Association of State
Colleges and Universities
One Dupont Circle/Suite 700
Washington, DC 20036-1192
Allan W. Ostar, President

0-88044-094-5